Economy and Health

Taking Sri Lanka towards the global best

Draft Commission Report

February 2005

National Commission on Macroeconomics and Health

Ministry of Healthcare, Nutrition and Uva-Wellessa Development

Colombo, Sri Lanka

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1. INTRODUCTION

1.1 Setting the tone

Since early 1990s, the concepts of poverty and development have evolved away from an exclusive emphasis on income towards a notion of well-being (UNDP 1990). Poverty, now, means not just lack of or low income but the undermining of human capabilities including health. Accordingly, deprivation of the means (such as physical access to health care) to achieve human capability is referred as human poverty. In fact, the United Nations General Assembly placed health as the heart of development when it articulated the Millennium Development Goals (World Bank 2004, WHO 2003). However, social dynamics of health includes a variety of interactive processes. Economic capability as indicated by Income constraints access to health and health promotion activities. On the other hand, ill-health limits people’s economic capability and contributes to poverty. This two-way causal relationship between economy and health has been highlighted by the Commission on Macroeconomics and Health (WHO 2001).

The Commission, while calling upon the low and middle-income countries to scale up the access to health care for the poor, recommended that each developing country establish a National Commission on Macroeconomics and Health (NCMH) to organise and lead the scaling up effort. More than 40 countries have taken steps to towards this direction based on three overarching themes (WHO 2004):
• Develop a multi-sector investment plan to improve health outcomes, especially among poor people;
• Strengthen commitments to increased financial investments in the health plan to achieve MDGs and other national goals; and
• Determine how to minimize non-financial constraints to the absorption of greater investments by increasing efficiency and effectiveness.

Sri Lanka, like in attaining good health status, took the lead in establishing the National Commission on Macroeconomics and Health (NCMH). The process for its establishment started with the decision in August 2002 of the National Health Council of Sri Lanka to set up the NCMH (NCMH 2004). The Commission, co-chaired by the Minister of Healthcare, Nutrition and Uva-Wellessa Development and the Minister of Finance, was established in November 2002. It is represented by the Central Bank, health and finance ministries, agriculture, ayurvedic and western medicine sectors, academia, NGO, research organization, private sector, the WHO Country Office, and UNDP. The major task for the commission is to raise high level political awareness and commitment to increased spending on health and to tackle systemic and institutional constraints to enable the effective delivery of health care services to the poor. Additionally, the Commission will focus on building the capacity for macroeconomics and health work at the central and provincial levels, including a potential National Centre in Macroeconomics and Health.

Despite long successes in public health arena, Sri Lanka still faces certain
disease challenges. Malaria, TB, and mental illness are on the rise and malnutrition persists. This report of the Commission provides the situation analysis of the existing economic and health care contexts in Sri Lanka. In the process, it brings out the linkage between economy and health, Sri Lanka in global context, national trends and regional variations.

1.2 Health-economy linkage

Health exhibits both investment and welfare characteristics (Bloom 2005). Investment theory views health as an essential input to produce human capital ultimately resulting in improved economic productivity (Shultz 1961). On the hand, welfare argument sees enhancement of health as an objective of development irrespective of whether or not it is economically productive (Sen 1999).

1.2.1 Health as an investment

Researches provided clear evidences of the economic benefits of improving health (Asian Development Bank 1997, Barlow 1967, Bloom 2005, Bloom and Williamson 1998, Cropper 1981, Sachs and Werner 1997, Shultz 1961, Strauss and Thomas 1998, UNDP 1990, WHO 1999, and World Bank 1993). Healthy nations/individuals are able to generate higher economic growth and the relationship has been found to be causal. In other words, survival rates or life expectancy are powerful predictors of income levels or of economic growth. Countries in east and south east Asia, where creation of opportunities for health, education and economic participation was faster, came out with better overall
growth and development compared to countries such as India and Pakistan where social opportunities have been much slower (Sen 1999). Social opportunities facilitated high employment economic growth, which in turn, created favourable environment for reduction of mortality and for expansion of life expectancy. Hence, health is wealth.

Diseases impede economic growth and development in three ways (WHO 2001). First, avoidable diseases reduce the number of years of healthy life expectancy. Diseases such as AIDS strike at an early productive age restricting the productive capacity of a country. The parent’s illness or death may deny/postpone the treatment of a child, force her/him to leave school prematurely and/or cause an illness in the child resulting in death. Hence, loss of one healthy year is valued as equal to three years’ annual earnings. Second, societies with high infant and child mortality rates have higher rates of fertility. Large number of children restricts the ability of the household to spend on health of each child. Third, high prevalence of diseases also undermine the industries’ returns to investment, as they are required to spend more resources to keep their workers ‘fit’ and in case of death, they are required to pay the compensation to the deceased. Hence, the list of disease victims is extended beyond the affected individuals to cover other healthy individuals, industries, nations and even next generations.

Similarly, wealth is health because wealthy nations/individuals are found to be healthy too. A simple scatter diagram of GDP per capita and life expectancy at
birth in 70 countries reveals that life expectancy increases with GDP per capita sharply at the lower levels of per capita GDP and stabilizes at about US $10,000 (Figure-1). Wealth operates in several ways to improve health. First, wealth leads to better overall standard and quality of life resulting from higher literacy, nutrition intake, sanitation, infrastructure and other facilities. All these collectively contribute to longer and healthy life. Second, when the national income is high, dependency ratio is low (Figure-2) and when the dependency ratio is low, life expectancy tends to be high (Figure-3). Third, rich countries spend higher share of GDP on health (Figure-4) and higher health expenditure leads to higher longevity (Figure-5). Health expenditure as proportion of GDP increases faster at the lower levels of per capita GDP and stabilizes around US $10,000/-. Life expectancy too follows this path indicating that investment in health is very productive for the countries at their lower levels of income. Countries that are classified as low income, lower and upper middle income countries (per capita GDP ≤ 9,385) stand to benefit from higher level of health spending. Fourth, government share in the country’s total health expenditure is high in countries where per capita GDP is high (Figure-6). As shown in the figure, higher the government expenditure on health, higher the life expectancy too.

In other words, poverty is a strong barrier to health. Poor nations/individuals are poor in both health and wealth. Many diseases are primarily concentrated in the poorest countries, and within those countries they disproportionately afflict populations that are living in poverty. Those living in absolute poverty, compared with those who are not poor, are estimated to have a five times higher probability
of death between birth and the age of 5 years, and a 2.5 times higher probability of death between the ages of 15 and 59 years (WHO 1999). Yet, health care resources are concentrated in rich countries/individuals; about 87% of the global

Figure-1. GDP per capita (in US $) and life expectancy (70 countries)
Source: Varatharajan 2005

Figure-2. Per capita GDP and dependency ratio (70 countries)
Source: WHO 2004a, and World Bank 2004a

Figure-3. Dependency ratio and life expectancy
Source: WHO 2004a

Figure-4. Per capita GDP and health expenditure (70 countries)
Source: WHO 2004a
health expenditure is concentrated in market economies where about 15% of people live. Within poor nations, the benefits (including government spending) are largely enjoyed by the richest.

1.2.2 Health as welfare

Given that, by and large, income and life expectancy move together, one may be tempted to argue that economic growth is the key to enhance health and longevity. However, the link between wealth and health is neither exclusive nor uniform, as growth does not get automatically translated into health and longevity. As it is given in Table-1, some countries have higher per capita GDP but poor health status. These countries have under-achieved in the field of health to the extent of about 40-80%. Botswana, for instance, has a per capita GDP of US $ 2,980/- but its health achievement is equivalent to that of country with a per capita GDP of US $ 160/-. In other words, countries with similar per capita GDP
Table 1. High income and poor health (2001)

Source: Varatharajan 2005

<table>
<thead>
<tr>
<th>Country</th>
<th>Per capita GDP (US $)</th>
<th>Life exp. at birth</th>
<th>Life exp. equivalent per capita GDP</th>
<th>Per capita GDP equivalent life exp.</th>
<th>Loss in life exp. (Yrs)</th>
<th>Under-achievement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>660</td>
<td>39.9</td>
<td>160</td>
<td>65.9</td>
<td>26.0</td>
<td>65.1</td>
</tr>
<tr>
<td>Botswana</td>
<td>2,980</td>
<td>40.4</td>
<td>160</td>
<td>72.5</td>
<td>32.1</td>
<td>79.5</td>
</tr>
<tr>
<td>Namibia</td>
<td>1,780</td>
<td>49.3</td>
<td>250</td>
<td>71.8</td>
<td>22.5</td>
<td>45.6</td>
</tr>
<tr>
<td>South Africa</td>
<td>2,600</td>
<td>50.7</td>
<td>360</td>
<td>72.1</td>
<td>21.4</td>
<td>42.2</td>
</tr>
<tr>
<td>Zambia</td>
<td>330</td>
<td>39.7</td>
<td>160</td>
<td>62.6</td>
<td>22.9</td>
<td>57.7</td>
</tr>
</tbody>
</table>

have attained a life expectancy of 72.5 years as against 40.4 years in Botswana. Growth can lead to better health only when it results in an improvement in the income levels of the poor and in an increase in the public health expenditure (Anand and Ravalion 1993). In other words, the link between national income and health is established through public expenditure on health and poverty reduction. That is, the usefulness of economic growth lies in the things it does to enhance longevity and health (Sen 1999).

While health pays off, enhancement of health probably has to be separated out from the process of economic growth and must be universally accepted as a major objective of the process of development itself (Sen 1999). Unlike growth,
development goes beyond the accumulation of wealth (GDP). The primary goal of development is to prevent people from avoidable ill-health and escapable mortality. Moreover, the effect of economic growth on health has been found to be relatively weak because economic growth also brings with it the scope for health inequity. The ‘growth’ in reality provides unprecedented opportunities to the rich to treat even the most cosmetic defects while millions of poor have no or little access to medical care. Hence, improvement of income is clearly an option for health development but it is not the sum-total of health development. In order to do that, people must be able to enlarge all human choices, not just income. In other words, economic growth must be combined with equitable distribution of its benefits to achieve real improvement in health. Equity requires that people have access to equal opportunities so that people can benefit from the opportunities.

In the past, there have been two types of success in the reduction of mortality – growth-mediated and support-led. The first type works through faster economic growth like in Republic of Korea while the second type operates through skilful provision of health care, education and other social services like those given in Table-2. These countries have achieved a higher health status than their per capita GDP would suggest. The gain in life expectancy is 3-13%.

One of the major contributing factors for better health returns seems to be the way health care resources are organised. For instance, life expectancy is lower in countries where there is high proportion of out-of-pocket health expenditure
(Figure-7) and low share of pre-paid resources (Figure-8). That is, life expectancy is high in countries where health care resources are better organised.

Table-2. Low income and better health (2001)

**Source:** WHO 2004a, World Bank 2004a

<table>
<thead>
<tr>
<th>Country</th>
<th>Per capita GDP (US $)</th>
<th>Life exp. at birth</th>
<th>Life exp. equivalent Per capita GDP</th>
<th>Per capita GDP equivalent life exp.</th>
<th>Gain in life exp. (Yrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>19,740</td>
<td>80.4</td>
<td>37,930</td>
<td>78.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Chile</td>
<td>4,260</td>
<td>78.7</td>
<td>23,960</td>
<td>72.6</td>
<td>6.1</td>
</tr>
<tr>
<td>China</td>
<td>940</td>
<td>71.1</td>
<td>3,990</td>
<td>63.2</td>
<td>7.9</td>
</tr>
<tr>
<td>Japan</td>
<td>33,550</td>
<td>81.9</td>
<td>37,930</td>
<td>77.2</td>
<td>4.7</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>940</td>
<td>70.3</td>
<td>3,990</td>
<td>63.2</td>
<td>7.1</td>
</tr>
</tbody>
</table>
Figure-7. Role of out-of-pocket expenditure in enhancing health

Source: WHO 2004a

Figure-8. Role of pre-paid health care resources

Source: WHO 2004a
2. National Commission on Macroeconomics and Health in Sri Lanka

In response to the call given by the global Commission on Macroeconomics and Health, National Health Council of Sri Lanka established the National Commission on Macroeconomics and Health (NCMH) in November 2002 (NCMH 2004). It is co-chaired by the Minister of Healthcare, Nutrition and Uva-Wellessa Development and the Minister of Finance. It is represented by the Central Bank, health and finance ministries, agriculture, ayurvedic and western medicine sectors, academia, NGO, research organization, private sector, the WHO Country Office, and UNDP.

2.1 Policy context

It is important to contextualise the formation and activities of the Commission. More specifically, it is relevant to understand the policy context concerning Sri Lanka’s health sector. If we look back policies concerning the health sector in the recent past, there are of two types. First type are the policies directly concerning the health sector. Second type are those primarily concerned about the macro economy or other sectors but have relevance for health sector.

Six major policies were in existent during the 15 year period from 1989 to 2004. First one, the 13th Constitutional Amendment of Sri Lanka in 1989, was a political policy with a bearing on the health sector. The Amendment devolved powers and functions to the provincial councils and allowed them to establish their own
Box-1. National Health Policy 1996

**Source:** Government of Sri Lanka 1997

- Improve preventive health programmes and existing medical facilities
- Improve the accessibility and quality of health care
- Provide basic health care free of charge in public health facilities
- Ensure access to safe, effective, affordable and acceptable methods of family planning
- Provide more efficient and cost-effective health care
- Promote community involvement in health care
- Provincial resource allocation based on national priorities and needs
- Integrated approach with government and non-government agencies for better health care
- Develop, regulate and coordinate with the private health sector
- Encourage health systems research
- Develop human resources in tune with needs
- Develop programmes for the elderly, mentally ill and displaced population
- Develop indigenous systems of medicines and homeopathy
- Increase public sector resources for health promotion and prevention.

provincial health ministries and manage the provincial hospitals and field health services. Second policy, formation of the Presidential Task Force in 1992, was
an action targeting the health sector. The Task Force was an important landmark for the health sector as it laid the foundation for the first National Health Policy (NHP) 1996 (Government of Sri Lanka 1997). Major pronouncements of the NHP 1996 are given in Box-1.

Third initiative dates back to 1997 when the President of Sri Lanka appointed another Presidential Task Force to recommend how to respond to the changing demands on the health care system in Sri Lanka (Government of Sri Lanka 1997a). Responsiveness and equity were the stated principles of this task force. The main recommendations of the task force are given in Box-2.

Fourth important policy development relevant to health sector in Sri Lanka was Vision 2020 launched in 2001 to accelerate the country's economic development through specific macro and sector-specific goals (Government of Sri Lanka 2001). For health, the goals included elimination of under-5 malnutrition, reduction of anaemia among pregnant women, reduction of the incidence of non-communicable diseases, special programmes in TB and malaria, and development of comprehensive health services with particular emphasis on the disadvantaged populations. Fifth policy was the Poverty Reduction Strategy Paper released in 2002 outlining strategies to achieve the goals envisaged by the Vision 2010 (Government of Sri Lanka 2002).
Box-2. Presidential Task Force on Health Policy 1997

**Source:** Government of Sri Lanka 1997a

- Establish a Commission for National Health to give direction based on needs, and priorities
- Adapt a system of performance appraisal to improve efficiency and effectiveness
- Develop health promotional programme using formal education system and the media
- Map all available resources to enable planned development of facilities and develop alternative financing mechanism
- Improve preventive and curative services of the elderly, disabled, estate population, victims of war and conflict, occupational health problems, health of school children, and for mental health.
- Rationalise human resource development and career development
- Reorganisation of government health care system in the context of decentralisation
- Improve hospital services in the districts in a planned manner

Most recent attempt (2003) is the Health Master Plan. The Sri Lankan Health Master Plan addressed the policy and strategic framework for an improved health system during the decade of 2006-15 (Government of Sri Lanka 2003). The aim was to build the health system on the past successes in order to effectively face
the future challenges. The overall goal of the Master Plan was to improve health status of the people and reduce inequalities. The Master Plan identified five strategies to achieve the goals specified for the year 2015. The identified strategies are given in Box-3.

**Box-3. Strategies of the Health Master Plan 2003**


- Ensure delivery of comprehensive health services which reduce disease burden and promote health
- Empower community to maintain its health
- Improve human resources for health development and management
- Improve health financing (mobilisation, allocation, and utilisation of resources
- Strengthen the stewardship and management functions of the health system

Specific action plans outlined in the Health Master Plan to support the strategies are given below:

*Strategy-1: Ensure delivery of comprehensive health services which reduce disease burden and promote health*

- Rationalize and strengthen network of health facilities and services
• Reduce priority diseases/conditions through strategic interventions
• Enhance quality of service delivery
• Improve health status of vulnerable populations
• Increase public confidence and client satisfaction
• Access new technologies
• Strengthen public-private partnerships to enhance efficient health service delivery
• Ensure adequate drugs, supplies and equipment

**Strategy-2: Empower community to maintain its health**

• Improve public awareness of their rights, responsibilities and options for care
• Improve participation of civil societies and NGOs in promoting behavioral and lifestyle changes

**Strategy-3. Improve human resources for health development and management**

• Expand functions and strengthen capacities of National and Provincial Ministries of Health in human resources development and management
• Rationalize the development and management of human resources for health
• Improve management, clinical and public health competencies of health staff
Strategy-4: Improve health financing (mobilisation, allocation, and utilisation of resources)

- Increase government financial support at all levels to strengthen the financial sustainability of the health sector
- Improve allocative efficiency of public funds
- Optional use of existing financial resources
- Strengthen financial management
- Improve financial equity and related equity of success
- Identify and test alternative financing mechanisms with a view towards national implementation
- Optimize private sector contribution, initially establishing an information sharing mechanism to include reporting on service use and quality as well as financing

Strategy-5: Strengthen the stewardship and management functions of the health system

- Strengthen managerial performance at national and decentralized levels
- Enhance efficiency, effectiveness and accountability of the MOH and decentralized units
- Strengthen and introduce performance management systems
- Establish a system for regulating the services of public and private providers
● Strengthen MIS

● Strengthen coordination and partnerships with other sectors

● Strengthen capacity in health research and technology assessment

● Strengthen autonomy of hospitals and units/divisions

All the six policies opened the doors for the dialogue on the economic principles in health thus creating the platform for the establishment of the national commission on macroeconomics and health. The global macroeconomic commission report provided the required thrust for its establishment.

2.2 Pathways

First step towards the establishment of the NCMH was taken in June 2002 when the Minister of Healthcare, Nutrition and Uva-Wellessa Development, Government of Sri Lanka led a delegation to participate in the ‘First Consultation on National Responses to the 2001 CMH Report’ in Geneva. It was this meeting which recommended that each country develop a specific plan of action suit its local milieu to implement the broad parameters of action outlined in the CMH Report. Key activities suggested for the country level plans are:

● Mobilize more political support and advocacy for investing in health as an essential tool for economic development and fighting poverty

● Develop a national health investment plan, with particular emphasis on the needs of the poor population
• Estimate funding needs and mobilizing additional financial support, domestically and internationally

• Secure better coordination among the main actors in the field of health.

National Health Council, in August 2002, discussed the outcomes of the consultation meeting and decided to set up the National Commission on Macroeconomics and Health so as to provide the required momentum to the key macroeconomic and health issues. The decision was to establish the Commission to be co-chaired by the ministers of health and finance. The NCMH was formally established in November 2002, with the following members:

• Ministry of Health care, Nutrition and Uva-Wellesa development

  Minister (co-chair), Deputy Minister, Secretary, and Director General (Health Services)

• Ministry of Finance

  Minister (co-chair), Secretary, Director (National Planning), Director (General External Resources)

• Others

  Commissioner of Ayurvedha (public indigenous system of medicine), Emeritus Chairman, Marga Institute (research NGO created in 1972), Institute of Policy Studies (autonomous public agency, reporting to Min of Finance), Post-graduate Institute of Agriculture (University of Peradeniya),
Governor of the Central Bank, Chairman, National Chamber of Commerce, WHO Representative for Sri Lanka, and Resident Representative UNDP.

Representatives of other ministries and institutions are invited to meetings of the NCMH according to agenda items.

### 2.3 Objectives

The overall aim of the Commission is to raise high level political awareness and commitment to increased spending on health and to tackle systemic and institutional constraints to enable the effective delivery of health care services to the poor. Additionally, the Commission will focus on building the capacity for macroeconomics and health work at the central and provincial levels, including a potential National Centre in Macroeconomics and Health. The specific objectives are:

- To advise the Government and the Minister of Health on all broad policy issues, policy options and directions in relation to investments in health, both in the public and private sectors so that health could make an optimal contribution to development of the country.

- To recommend new approaches and strategies for scaling up health interventions, particularly those aimed at the poor, and increasing investments in health.
• To commission appropriate studies in different aspects of macroeconomics and health that will support the work of the Commission.

• To recommend modalities for mobilizing increased external resources for health development and to advise on broad policies and strategies for their optimal utilization.

• To advise the Minister of Health on all aspects related to economics and health for overall health and human development in Sri Lanka.

2.4 Governance and management

The Geneva Consultation a variety of different ways for the macroeconomics and health work at the national level. The emphasis was to have an inter-ministerial arrangement best suiting the local context. Some specific options provided by the meeting were:

• Health working group of the PRSP national steering committee

• National health council or commission

• National commission for macroeconomics and health

• Sub-regional group (such as in the Caribbean).

Although ‘National Health Council’ and ‘National Health Development Committee’ already existed in Sri Lanka, it was decided to create the National Commission on Macroeconomics and Health, functioning in an advisory capacity and reporting to the National Health Council, due to the following reasons:
- Large size of the ‘National Health Council’ (chaired by the Prime Minister and attended by several Ministers) and of its agenda

- Large size of the ‘National Health Development Committee’ (chaired by the Secretary of Health and attended by Provincial Health Secretaries, Provincial Health Directors, Chairmen of Boards under the Ministry of Health, Director General of Health Services, and representatives from the Ministry of Finance, Treasury and Department of National Planning, among others) and of its agenda.

- Complexity and technicality of the economic and health issues

- Size of the economic and health agenda.

To support the work of the Commission, a Planning Committee, a Core Committee and two Working Groups were set up, as well as a Secretariat located in the Ministry of Health.

2.4.1 The Planning Committee

The Planning Committee, chaired by the Secretary of Health, is the executive arm of the NCMH and meets on a monthly/bi-monthly basis. Its members are:

- Ministry of Health care, nutrition and uva-wellesa development

  Deputy Director General (Management development), Director (Organization development), and Director (Planning).

- Heads of Working Groups (Budgeting, and Financing)
• Representative of the Institute for Policy Studies (under Ministry of Finance)
• Representative of the Marga Institute (Research NGO)
• WHO Sri Lanka Office

2.4.2 The Core Committee

The Core Committee, chaired by the NCMH Coordinator, was formed as a sub-committee of the Planning Committee to review the progress of the Commission in a routine manner. The Core Committee comprises of the heads of the working groups, Representative of the Institute for Policy Studies, Representative of the Marga Institute and WHO Sri Lanka Office.

2.4.3 Working groups

The two Working Groups, chaired by two Senior Lecturers in economics, University of Colombo, comprise of the following members:

2.4.3.1 Budgeting

• Senior Lecturer in Economics, University of Colombo (Chair)
• Ministry of Finance

Secretary (Finance Commission), Director (Human resources, National planning), and Director General (National budgeting)

• Ministry of Healthcare, Nutrition and Uva-Wellessa Development
Deputy Director General (Planning), Deputy Director General (Chief Accountant), and Director (Finance estimates)

- Provincial Ministries of Health

  Provincial Directors Health (Western, Southern and North Central Provinces)

- District level health services

  Director Health Services, and Accountant (Ratnapura district)

- Representative Institute of Policy Studies (under the Ministry of Finance)

- President, Independent College of General Practitioners (private sector)

2.4.3.2 Financing

- Senior Lecturer in Economics, University of Colombo (Chair)

- Ministry of Finance

  Director General (National planning), Director General (External resources), and Additional Director General (Budget)

- Ministry of Health care, Nutrition and uva-wellesa development
Deputy Director General (Finance), Deputy Director General (Planning), and Director, Children’s Hospital (tertiary care), Colombo

- Central Bank
  
  Senior Economist (Research department)

- Representative, Institute of Policy Studies (under Ministry of Finance)
- President, Independent College of General Practitioners (private sector)
- Representative, Marga Institute (Research NGO)

2.4.4 The Secretariat

The Secretariat is located in the Ministry of Health, Nutrition and Uva-Wellessa Development and is headed by the NCMH Coordinator. It has a small staff including a Secretary and a Research Assistant.

2.5 Activities

During the two years of its existence since November 2002, the NCMH met six times and its Planning Committee 12 times. In the pursuit of the central objective of mobilizing more resources for health as an essential tool for economic development and fighting poverty, the NCMH applied the following strategies:

- Publication of the NCMH report by 2005
- Preparation of the National Health Investment Plan by 2005
- Initiation of research and action oriented studies to address the health economic issues in the country
- Development and implementation of advocacy programme at the central and provincial levels
- Capacity building of medical professionals, administrators and economists at the central and provincial levels in the field of health economics
- Participation in international meetings dealing with economics and health issues

2.5.1 Publication of the NCMH report

The objective of this Report is to present a situation analysis of health economic issues in the country and to provide strategies to address the problems. The report is based on

- Already published reports on this topic
- Unpublished documents
- Reports of the studies commissioned by the NCMH
- Reports of the working groups
- Interviews with policy makers, heads of health care institutions, doctors, researchers, and academicians.
- Focus group discussions with doctors, nurses, teachers/trainers, government health care delivery staff, patients/clients, community leaders and community members.
Following the publication of the Report, it is foreseen to develop advocacy materials and to hold a national consultation.

2.5.2 National Health Investment Plan

A number of important documents have been already prepared in recent years identifying the main priorities in the health sector. In 2005, the NCMH plans to finalize the National Health Investment Plan on the basis of these early documents and the NCMH report.

2.5.3 Studies on health economic issues

In the first meeting of the NCMH in December 2002, a number of issues in the field of economics and health had been identified by the participants as requiring urgent attention, such as the drastic drop in funding for preventive health services, need to develop some mechanisms to minimize hospital admissions, efficient utilization of peripheral services, prevention of wastage of drugs, the need to identify new financial resources (earmarked tax, paying wards, community financing) and the need to make more efficient use of human resources.

In May 2003, a call for proposals on ‘economics and health issues’ identified by the NCMH was issued and 34 letters of interest were received. On this basis, the NCMH approved the following 6 studies undertaken under the supervision of the working groups:
• Review of cost studies of health services
• Evaluation of taxation and fiscal incentives to support health sector development
• Review of the current basis for the allocation of health resources by the Central Government to the Provinces
• Economic cost of five common diseases and productivity losses incurred (asthma, hypertension, ischaemic heart disease, diarrhea, viral fever)
• Occupational health and productivity loss
• Cost implications of establishing a Community Nursing Service in Sri Lanka.

2.5.4 Advocacy

The advocacy programme includes presentations at the level of the National Health Council and National Health Development Committee, materials for mass media, seminars for academia, researchers, politicians and media (central and provincial levels), translation of the ‘Macroeconomics and Health Initiative’ into Sinhalese and Tamil, publication of a newsletter, and opening of a website.

2.5.5 Capacity building

The NCMH, in collaboration with the World Bank Development Institute, offered a distance learning course on ‘Health Outcomes and the Poor’ to Medical Administrators at the central and provincial levels. A seminar for senior policy
makers was also held in July 2003 on ‘Policy Issues in Health Financing’. Discussions were held at the national level to develop health economics curriculum to be integrated into the already existing masters level programme for medical doctors. A training seminar and workshop are also planned for 2005 to train some of the faculty members from medical faculty to carry out the training in future. Besides, the fellowship programme under the NCMH will be used to train medical doctor(s) at a higher (master) level to take up health economic issues in a more systematic manner in future. A proposal to establish a National Centre on Health Economics will also be developed and implemented in the long run.

2.5.6 Participation in international meetings

The objective is to share the country’s experiences in the field of economics and health and benefit from international experiences. Senior Government officials and NCMH members participated in a number of international meetings where macroeconomics and health issues were discussed. To mention a few,

- First Consultation on National Responses to the CMH Report (Geneva, June 2002)
- Regional Conference of Parliamentarians (December 2002)
- SEARO Regional Consultation on Macroeconomics and Health (New Delhi, August 2003)
- Second Global Consultation on Macroeconomics and Health (Geneva, October 2003).
3. ECONOMIC CONTEXT IN SRI LANKA

As it has been seen, economy plays a crucial role in determining the health status. Countries with better economy and with efficient organisation of health care resources are found to have better health status. Given this scenario, it is possible to categorise the countries into five broad classes viz.,

**Class-1**: Countries with strong economy, efficient health economy and better health

**Class-2**: Countries with strong economy but not-so-efficient health economy and unimpressive health improvement

**Class-3**: Countries with strong economy but not-so-efficient health economy and poor health

**Class-4**: Countries with not-so-strong economy, efficient health economy and better health

**Class-5**: Countries with weak economy, inefficient health economy and poor health

Countries such as Japan and Canada can be placed under **Class-1** whereas USA belongs to **Class-2**. South Africa and Botswana can be classified under **Class-3** while Sri Lanka and China fall under **Class-4**. Almost all the developing countries such as Ethiopia, Malawi, Rwanda and Zambia fit into **Class-5**. Sri Lanka can be fitted into **Class-4**. Its health achievements are termed as ‘good
health with relatively low income’. If we look at the achievements, the success in the field of health is largely attributable to the social welfare package of the 1940s (Government of Sri Lanka 2003a).

The package itself was made possible by the expansion and re-organisation of the economy. For instance, if we look at the health care prospects during the 1970s and 1980s, adverse economic conditions and structural adjustment programmes contributed their bit to slow down the progress thus widening the income and disparities in access to health. In fact, all along health prospects followed economic progress in Sri Lanka. As it can be seen from Figure-10, decline in IMR in Sri Lanka closely followed the growth in per capita GDP during 1960-2003. Similarly, growth of life expectancy too followed the per capita GDP (Figure-11).

**Figure-10. Sri Lanka: GDP and IMR trends (1960-2003)**

**Source:** Government of Sri Lanka 2002a, Central Bank of Sri Lanka 2004

**Figure-11. Sri Lanka: GDP growth and life expectancy (1960-2003)**

**Source:** Government of Sri Lanka 2002a, Central Bank of Sri Lanka 2004
3.1 Sri Lankan economy at a glance

Started as a ‘low-income’ country, Sri Lanka has progressed to become a ‘low-middle income’ country over a period of 50 years. Sri Lanka’s Gross Domestic Product (GDP) has grown steadily at a rate of 4.2% during this period with a gradual acceleration of its pace (Central Bank of Sri Lanka 2004). GDP now grows at a rate of 5.9% (Box-4) (Central Bank Sri Lanka 2004a). Besides expansion, the economy has also got transformed from a pre-dominantly agricultural economy into the one dominated by the service sector. Service sector now accounts for 55% of GDP and determines 70% of the economic growth whereas the share of agriculture in growth is a mere 5%. The size of the Sri Lankan economy in 2003 was Rs. 1,760 billion or US $ 18.0 billion with the per capita GDP of US $ 935. Government accounts for 23.7% of economic activity and 13% of the employment in the country. About 45% of the country’s population lie below or near the poverty line with 6.6% people earning below one US dollar per day.

The gender development index for Sri Lanka is well above the average for developing countries (WHO 2002). Gender empowerment in Sri Lanka is also much higher than in the rest of the countries in South Asia. The female participation in the work force is fairly high, particularly in the professional grades and garment industries. There are also more women employed at administrative and technical levels than in the rest of South Asia.
<table>
<thead>
<tr>
<th><strong>Population (million)</strong></th>
<th>19.252</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Rural 72.2%</td>
<td></td>
</tr>
<tr>
<td>- Urban 21.5%</td>
<td></td>
</tr>
<tr>
<td>- Estate 6.3%</td>
<td></td>
</tr>
<tr>
<td><strong>Population density (per sq. km.)</strong></td>
<td>307 (range 116 - 1,523)</td>
</tr>
<tr>
<td><strong>Average household size</strong></td>
<td>4.2</td>
</tr>
<tr>
<td><strong>GDP (billion)</strong></td>
<td>Rs. 1,760 (US $ 18)</td>
</tr>
<tr>
<td><strong>GDP per capita</strong></td>
<td>Rs. 90,244 (US $ 935)</td>
</tr>
<tr>
<td><strong>Growth of GDP (%)</strong></td>
<td>5.9</td>
</tr>
<tr>
<td><strong>Budget deficit (% GDP)</strong></td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Public debt (% GDP)</strong></td>
<td>105.9</td>
</tr>
<tr>
<td><strong>Debt servicing (% GDP)</strong></td>
<td>19.6</td>
</tr>
<tr>
<td><strong>Unemployment (%)</strong></td>
<td>8.4</td>
</tr>
<tr>
<td><strong>Govt. share in employment (%)</strong></td>
<td>13</td>
</tr>
<tr>
<td><strong>Dependency ratio (%)</strong></td>
<td>49.3</td>
</tr>
<tr>
<td><strong>Inflation (%)</strong></td>
<td>6.3</td>
</tr>
<tr>
<td><strong>Human Development Index</strong></td>
<td>0.73</td>
</tr>
<tr>
<td>Category</td>
<td>Percentage</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>People below the poverty line (%)</td>
<td>23.9</td>
</tr>
<tr>
<td>People on the border line of poverty (%)</td>
<td>21.5</td>
</tr>
<tr>
<td>Population earning &lt; $1/day (%)</td>
<td>6.6</td>
</tr>
<tr>
<td>Population earning &lt; $2/day (%)</td>
<td>45.4</td>
</tr>
<tr>
<td>Gini coefficient for income inequality</td>
<td>0.48</td>
</tr>
<tr>
<td>Access to safe drinking water (%)</td>
<td>70</td>
</tr>
<tr>
<td>Literacy rate (%)</td>
<td>91.6</td>
</tr>
<tr>
<td>Government expenditure (% GDP)</td>
<td>23.7</td>
</tr>
</tbody>
</table>

### 3.1.1 Growth performance

Growth of Sri Lankan economy, despite internal conflicts, has been steady since independence. Average economic growth during the post-independence period was 4.2% and has shown a steady increase from 3% in the 1950s to 5.2% during the 1990s (Central Bank of Sri Lanka 2004). Highest average annual growth (6.2%) was achieved during 1978-82. The growth rate of 5.2% during the 1990s, the period of internal conflicts and disturbances, was remarkable. The country’s trade dependence has not changed either and still remains high at 68% of GDP, only a marginal decline from 70% at the time of independence.
Re-organisation of the economy has resulted in a qualitative change in the composition of the economy. From a country predominantly producing and exporting few agricultural commodities during the early 20\textsuperscript{th} Century, Sri Lanka has progressed towards producing and exporting industrial/service commodities to the extent of 75\% at the end of 20\textsuperscript{th} Century (Sanderatne 2000). Agricultural sector's contribution to GDP has declined from 51\% in 1951 to 19\% in 2003 (Central Bank of Sri Lanka 2004, Sanderatne 2000). In addition, there has been a qualitative shift within primary, secondary and service sectors from a plantation-based industrial and service development to consumer-based development. Even within agriculture, share of non-plantation commodities such as paddy has increased. Similarly, there has been a marked change in the composition of imports and exports. Intermediate goods dominate the imports now marking a significant change from a situation in 1950s when over half of the imports was consumer goods including food. Similarly, the country has moved away from a predominantly agriculture-led exports to a industry-dominated one.

All these transformations in the economy, the introduction of universal franchise in 1931, development of roads and railways, and development of the dry zone during the post-independent period have altered the lifestyles of the Sri Lankan population by breaking the rural-urban divide and isolation of village economy.
3.2 Fundamental economic challenges

3.2.1 Economic slowdown

Although economic growth has been reasonably steady at around 4% during the post-independent Sri Lanka, the growth rate has shown a sign of deceleration during 2001-03 although the economy did recover well from a negative growth rate of -1.5% in 2001 to reach 5.9% in 2003 (Central Bank of Sri Lanka 2004, Sanderatne 2000). Factors that positively influenced the economic growth in Sri Lanka are absence of internal shocks, high foreign investment, continuity in economic policies, favourable monsoon, sound fiscal management, low government expenditure on defence, and favourable terms of trade. Nevertheless, all these factors do not act in isolation. For instance, internal conflicts disrupt economic policies, fiscal management, and foreign investment. Conflict in the North and East alone seems to have slowed down the economic growth by about 2.3% points a year (Central Bank of Sri Lanka 2004a). It also necessitates enhancement of defence spending. Government expenditure on defence increased from less than 1% of GDP in 1960s to 3.1% in 2002 (Central Bank of Sri Lanka 2004, Sanderatne 2000). This alone has acted as a single dominant factor in slowing down the economy in several ways. Economic policies too play a major role and if they are put to uncertainty due to fundamentally different economic regimes resulting in reversal of economic policies, growth suffers. Inward looking economic policies and inefficient resource utilisation act as strong barriers of economic growth.
3.2.2 **Inter-provincial variations**

While the overall growth of GDP is good, the growth of GDP across the provinces, except Western and Southern provinces, has been declining since 1997 (Figure-12). Moreover, Western province, with a population share of 28.4%, accounts for about 50% of GDP in the country. Given the declining trend in other provinces and increasing trend in Western province, the gap between the provinces is only widening. For instance, North East province, with a population share of 13.6%, shared only 7.5% of GDP in 2002. Similarly, Sabaragamuwa province, with a population share of 9.5%, accounts for 6.5% of GDP in the country.

3.2.3 **Unfavourable fiscal situation**

The economy also shows signs of nervousness on account of problems in fiscal management. The ratio of budget deficit to GDP indicates how well the fiscal deficit is controlled in relation to the economic growth achieved by a country. In Sri Lanka, this ratio is 8% against the standard acceptable limit of 3% (Rangarajan 2000). Actual expenditure often exceeds budget estimates while revenues are under-realized.

As a result, there have been frequent budget revisions and significant supplement budgets amounting to 9.2% of the total budget. Public debt, another indicator to read the pulse of the economy, too is high and is increasing. Sri Lanka’s public debt in 2003 was 105.9% of its GDP and has been steadily
increasing from 72.8% in 1978. As a result, the World Bank describes Sri Lanka as one of the ‘moderately indebted’ countries (World Bank 2004b).

**Figure-12. Share of GDP and population across provinces (1997-2002)**

*Source: Central Bank of Sri Lanka 2004*
3.2.4 Lack of accountability in public spending

Perhaps, it could be due to the lack of any mechanism for monitoring and reviewing outputs and outcomes of government expenditure (World Bank 2003). Accountability to spend the public money efficiently and for the purpose intended is under-developed in Sri Lanka. It is still worse at the sub-national levels. Since provincial and local governments rely on the central government for funds, there is a confusion over the role of the centre vis-à-vis provinces resulting in excessive duplication of efforts and resources. Devolution of certain subjects to the councils has only led to fragmentation and overlap of responsibilities between the centre and the provinces mainly in the areas of education, health and roads.

3.2.5 Over-centralisation

Budgeting of the provincial councils or local governments is ineffective at present due to excess reliance on central government for funds and fiscal stresses at the centre. Budgetary transfers to the eight provincial councils in 2001 amounted to 10% of the total outlays and provincial councils depend on the central
government for more than 80% of their financing needs. Local governments’
expenditure accounts for 2.5% of the total budget while their revenue accounts
for 2.2%. Except the Colombo Municipal councils, all the other local governments
(14 Municipal councils, 37 Urban Councils and 258 Pradeshiya Sabhas) rely on
the central government for their recurrent expenditure.

3.2.6 Poverty and inequity

Although the biggest strength for Sri Lanka is its people, who are literate and
healthy, the country faces two fundamental challenges – raising the poorest
(25% of population) out of poverty and creating sources of growth and
competitive advantage that will enable the country to increase the standard of
living for all citizens (World Bank 2004c). The recent economic downturn and the
persistent drought during 2000-02 have eroded the economy of the country.
Many households, particularly those from the rural areas, have become destitute
or insolvent (Central Bank of Sri Lanka 2004a).

The incidence of poverty is particularly high in North East. About 12% of North
East people reported change of residence due to war against 1% in the rest of
Sri Lanka (World Bank 2002). Agriculture, accounting for 35% of employment in
the country, contributes only 19% to GDP and to a mere 5% to the growth of
GDP. As a result, poverty is high among those employed agricultural sector
(Department of Census and Statistics 2004). The difference in poverty level
between agricultural and non-agricultural sectors in 2002 was found to be 37.5%.
Poverty is also high among Sri Lankan Tamils compared to Sinhalese, Indian

Tamils and Moors; the difference in the level of poverty between Sinhalese and Sri Lankan Tamils is 16.9%.

Among the provinces, people below the poverty line varies from 9.2% in Western province to 31.8% in Uva province (Department of Census and Statistics 2004). In other words, the difference between the best and the worst is 2.5 times. Among the districts, Colombo reports 5% whereas Badulla has 31.5% yielding a difference of 5.3 times between the best and the worst. Rate of unemployment too varies between 6% in Uva province to 10.6% in Southern province with the difference of 76.7% (Nanayakkara 2004). Proportion of income shared by the lowest 20% of the population is as low as 3.6% in Moneragala district compared to 6.2% in N uwera Eliya (Department of Census and Statistics 2004). On the other hand, the richest-20% shared 45.1% in Nuwera Eliya and 60.8% in Moneragala. Adult literacy ranges between 81.7% in Nuwera Eliya and 95.3% in Gampaha.

Proportion of population using solid fuels is high at 89% and dependency ratio is higher than that of some countries (Table-3). However, access to water and sanitation is good. Labour participation rate is poor among women compared to men; about one-third of women are in labour force compared to two-third among men. The difference in labour force participation is highest in Polonnaruwa district where less than one-fourth of women are in labour force compared to 72.9% for men.

Source: WHO 2004a

<table>
<thead>
<tr>
<th>Development indicator</th>
<th>Sri Lanka</th>
<th>Global Best</th>
<th>Scope for improvement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependency ratio (%)</td>
<td>47</td>
<td>37</td>
<td>27.0</td>
</tr>
<tr>
<td>Population using solid fuels (%)</td>
<td>89</td>
<td>5</td>
<td>94.4</td>
</tr>
<tr>
<td>Rural access to water (%)</td>
<td>70</td>
<td>100</td>
<td>42.9</td>
</tr>
<tr>
<td>Rural access to sanitation (%)</td>
<td>93</td>
<td>100</td>
<td>7.5</td>
</tr>
</tbody>
</table>

There exists consumption inequality (Gini coefficient) among ethnic groups in Sri Lanka (World Bank 2002). Gini coefficient for consumption equality is estimated as 0.325 for Sinhalese whereas it is 0.249 for Indian Tamils, 0.265 for Sri Lankan Tamils and 0.291 for Moor. Proportion of under-weight children is high (42%) among estimate population compared to 16% among urban population, and 24% among rural population. Other economic deficiencies bearing adverse consequences for health system are (World Bank 2003):

- Excessive staff but not of the calibre required
- A culture reluctant to change
- Systemic inefficiencies
- Political interference
- Limited use of technology
3.3 Future direction

It is postulated that sustained peace would strengthen the economic situation, which in turn will enable the government to divert adequate resources to health. The government also has taken note of poverty and its programme to address these challenges is contained in the Poverty Reduction Strategy paper (PRSP), prepared in consultation with civil society groups and international aid agencies and issued in December 2002 (Government of Sri Lanka 2002). The goal is to halve the number of people living below the poverty line by 2015. However, the challenges before the government are to sustain the current rate of growth GDP, create adequate employment, make the public sector more efficient, eradicate public debt, invest in health, education and social security and reduce poverty. On its part, the government has expressed its intention to move towards a more open, participative form of governance and decision making. It wishes to move forward by bringing new legislation and rules to address institutional issues and by building capacity including training to improve organizational efficiency and effectiveness.
4. HEALTH SCENARIO

Sri Lanka has 19.25 million population (2003) with a density of 307 persons per sq. km (Central Bank of Sri Lanka 2004a). The pace of urbanisation has been slow and 78.5% of people still live in rural and estate areas. However, it is projected that Sri Lanka will have 40% urban population in 2030. Despite significant human development achievements, every fourth Sri Lankan lives below poverty line (World Bank 2004c). Life expectancy is reasonably high at 73 years comprising of both young and fastest greying population (Ranan-Eliya et al 1998). The greatest challenge before the health system in Sri Lanka is to cope with the increasing proportion of old age population and dual disease burden. These two together push the Sri Lankan health economy towards a ‘high-cost health care regime’.

4.1 Past achievements

Sri Lanka’s health achievement, with a low per capita GDP, is noteworthy. With a per capita income of US $ 935/-, Sri Lanka’s achievements in life expectancy (73 years in 2003) can be equated with a country whose per capita GDP is US $ 2,500/- (WHO 2004a, World Bank 2004a, Government of Sri Lanka 2002a). In other words, countries with similar per capita GDP have achieved a lower life expectancy of 63.2 years compared to Sri Lanka’s 73 years, a clear gain of 9.8 years. What Europe achieved in 45-145 years and what many other developing countries failed to achieve, Sri Lanka achieved them in about 20 years’ time (Ranan-Eliya et al 1998). For instance, Sri Lanka has achieved the current levels
of life expectancy, crude death rate and IMR of many developing countries in as early as 1960s (WHO 2004a, Central Bank of Sri Lanka 2004a). In other words, Sri Lanka is ahead of other developing countries by about 4 decades in achieving the health status.

The crude death rate remained close to or above 30 per thousand population; it was as high as 35.1 in 1906 (Central Bank of Sri Lanka 2004, Sanderatne 2000). This situation prevailed till 1930s. During 1930s, there was a major thrust on health due to which death from all infectious diseases fell sharply. The crude death rate came down to 14.3 by 1946-47 and declined further to 8.6 in 1960; it was 5.8 in 2002. At the same time, total fertility rate reached below the replacement level of 2.1 in 1994. The trends in crude death rate, MMR, IMR and deaths due to intestinal infections, nutritional deficiency, anaemia, TB, and hypertension are given in Figure-13. As a result of favourable health indicators, life expectancy has gone up from little over 40 years in 1945 to 73 years now (Figure-14). Contraceptive prevalence among ever-married women is reasonably high (70.8%) in Sri Lanka (Department of Census and Statistics 2002). Breast feeding is reasonably high at 76.4% in Sri Lanka.

These favourable achievements were the outcome of a mix of policies such as free health care, free education, development of peasant agriculture, and subsidized rice (Gunatilleke et al 1998). Social progress has reached the vulnerable groups (infants, young children, and their mothers) was achieved with
the degree of equity. Whatever inequity in the form of variation in IMR across districts seems to be gradually declining.

4.2 Disease trend

Sri Lanka has gone through all the three phases of the demographic transition in the 20th century (Sanderatne 2000). Early 20th century witnessed slow population growth due to co-existence of high rates of fertility and mortality. Epidemics broke out and health standards were poor. Cholera, dysentery, malaria, tuberculosis and typhoid were rampant. Second phase during mid-20th century saw high population growth on account of high fertility and low mortality due to successful disease control measures. The third phase, starting from the early 1990s, is again characterised by low population growth due to low fertility and mortality.

Figure-13 . Sri Lanka: Decline in death rate, MMR, IMR & disease deaths

Source: Government of Sri Lanka 2002a, Sanderatne 2000
Despite long list of successes, Sri Lanka still has heavy disease burden owing to unfinished agenda and newly emerging diseases due to persistence of poverty, changes in lifestyles and deterioration of environment. Intestinal infections remain where it was in 1970 while malaria, although declining, shows fluctuation
Figure-15. Trend in disease prevalence

Source: Government of Sri Lanka 2002a

Diabetes, liver & health diseases, and hypertension

Intestinal infection and malaria

HIV

Dengue deaths

Dengue prevalence

Suicide
(Figure-15). In the recent years, prevalence of and death due to dengue is also showing an increase. On the other hand, diseases such as diabetes, liver diseases, hypertension and hear ailments show a marked increase in prevalence. Prevalence of all these diseases is above 1 per 1,000 population in Sri Lanka with the prevalence of hypertension being 5. HIV is not a threatening disease at present but it shows an increasing trend. Rate of suicides in Sri Lanka increased sharply. Although the rate is coming down now, the prevalence is still on the higher side. All these diseases/conditions are showing a steady increase over a period of time.

Non-communicable diseases also dominate the top-5 causes of death (Table-4). Homicide/violence has emerged as a leading killer accounting for more than 10% deaths. On the other hand, injuries top the hospitalisation list even while hypertension figures as one of the causes of hospitalisation (Table-5). Share of infectious diseases in the disease burden declined from 14% in 1980 to 5% in 1996. The rate of hospitalisation in the country can be estimated as at least 110 per 1,000 population. Simple extrapolation would suggest that the country’s total disease burden would be about 450 per 1,000 population.

4.3 Determinants of disease burden

Place of residence, literacy, employment status, level of poverty, and lifestyle appear to be playing a role in determining the health/disease status of the Sri Lankan population.
Table-4. Causes of deaths in Sri Lanka (2001)

**Source:** Government of Sri Lanka 2002a

<table>
<thead>
<tr>
<th>Cause of death</th>
<th>Rate per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischaemic heart disease</td>
<td>18.94</td>
</tr>
<tr>
<td>Diseases of intestinal tract</td>
<td>17.47</td>
</tr>
<tr>
<td>Pulmonary heart &amp; pulmonary circulation diseases</td>
<td>14.56</td>
</tr>
<tr>
<td>Cerebrovascular disease</td>
<td>14.21</td>
</tr>
<tr>
<td>Neoplasms</td>
<td>11.70</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>11.17</td>
</tr>
<tr>
<td>Toxic effects of pesticides</td>
<td>7.58</td>
</tr>
<tr>
<td>Others/un-diagnosable</td>
<td>7.03</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>6.72</td>
</tr>
<tr>
<td>Zoonotic and other bacterial diseases</td>
<td>6.69</td>
</tr>
<tr>
<td>Traumatic injuries</td>
<td>6.10</td>
</tr>
</tbody>
</table>

### 4.3.1 Place of residence

Use of mosquito protection methods is found to be significantly lower among estate (54.1%) and rural (25.8%) population (Department of Census and Statistics 2002). Similarly, hygienic practices while cooking and feeding the children, generally satisfactory in Sri Lanka, are poor among a section (15%) of
Table-5. Leading causes of hospitalisation in Sri Lanka (2001)

**Source:** Government of Sri Lanka 2002a

<table>
<thead>
<tr>
<th>Cause of hospitalization</th>
<th>Rate per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traumatic injuries</td>
<td>2,737.5</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>1,826.3</td>
</tr>
<tr>
<td>Viral diseases</td>
<td>1,219.5</td>
</tr>
<tr>
<td>Others/un-diagnosable</td>
<td>1,198.0</td>
</tr>
<tr>
<td>Diseases of intestinal tract</td>
<td>749.9</td>
</tr>
<tr>
<td>Direct/indirect obstetric causes</td>
<td>749.9</td>
</tr>
<tr>
<td>Urinary diseases</td>
<td>696.7</td>
</tr>
<tr>
<td>Diseases of musculoskeletal system &amp; connective tissue</td>
<td>619.8</td>
</tr>
<tr>
<td>Skin diseases</td>
<td>593.9</td>
</tr>
<tr>
<td>Hypertension</td>
<td>478.9</td>
</tr>
</tbody>
</table>

the estate population. Prevalence of low birth and pre-mature babies is attributed to anaemic mothers. Nutritional deficiency is relatively high among estate (50.4%) and rural (21.8%) population. IMR is also high (47.5) among estate population compared to urban areas (14.9%).
Use of mosquito protection methods and hygienic practices are also found to be relatively lower among illiterate and semi-literate population. Proportion of mothers bearing more than 5 children is also high (>16%) among this group compared to the rest (2.9%). Nutritional deficiency is high among illiterate (38.0%) and semi-literate (31.1%) population. Contrary to expectations, nutritional deficiency is high (25.1%) among employed people compare to the unemployed (18.4%)

Health indicators also vary across the districts. For instance, crude death rate is 3 per 1,000 population in Mannar district while it is 9.0 in Colombo district (Figure-16); the distance from the best district ranges between

**Figure-16. Crude death rate across districts**

*Source: Central Bank of Sri Lanka 2004a*
3.3% for Moneragala district and 3 times for Colombo district. Similarly, IMR is 2.0 in Trincomalee district and 22.5 in Anuradhapura district (Figure-17); the distance to catch up with the best ranges between 60% for Moneragala district and 10.1 times in Anuradhapura district. Maternal death rate Colombo district is 14.86 whereas it is 167.85 in Nuwera Eliya district (Figure-18); the distance to travel to reach the best varies between 3.2% for Moneragala district and 10.3 times in Nuwera Eliya district.

4.3.2 Poverty

Diseases of poverty such as malnutrition, anaemia among pregnant women, malaria, and dengue are still prevalent in Sri Lanka. Prevalence of anaemia among school going children is found to be in the range of 35-50%. Large-scale malnutrition among young children in Sri Lanka is strongly related to income poverty. Low income constraints the availability of adequate nutrient intake, which in turn causes malnutrition (WHO 2002a). Low income is also associated with a higher incidence of diarrhoeal infections. Anaemia is also widely prevalent among pregnant women in Sri Lanka. One in every three women in Sri Lanka is underweight and/or anaemic. Some estimates even place the prevalence in the range of 40-70% (Government of Sri Lanka 2003b). Incidence of low birth weight is found to be high among mothers with low maternal height and weight and low income. Under-nutrition is also a problem among adult men (both rural and urban).
Figure-17. IMR among districts (2001)

Source: WHO 2003a
Figure-18. Maternal deaths in districts (2001)

Source: WHO 2003a
Deep economic and social crises can result in poor health outcomes. The mortality and morbidity associated with infectious diseases are high among the poorest group of people (Government of Sri Lanka 2003b). Adult female education has been proved to be one of the strong correlates of child mortality (World Bank 2004a). Access to, and use of, safe water, adequate sanitation, and safe cooking fuel have direct effects on health status. These basic services vary across income groups and poorest income group had poorest of these facilities and vice versa (Table-6). The use of safe energy sources affects health. Indoor air pollution hurts family’s health including child health. Coping with cold, in cold

**Table-6. Access to basic facilities by consumption quintiles 1999-2000**

*Source: Government of Sri Lanka 2003c*

<table>
<thead>
<tr>
<th>Consumption quintile</th>
<th>Average monthly consumption per capita (Rs.)</th>
<th>Access (%) to safe</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Drinking water</td>
<td>Latrine</td>
</tr>
<tr>
<td>Poorest</td>
<td>821</td>
<td>61</td>
<td>84</td>
</tr>
<tr>
<td>Second</td>
<td>1,211</td>
<td>74</td>
<td>85</td>
</tr>
<tr>
<td>Third</td>
<td>1,537</td>
<td>78</td>
<td>89</td>
</tr>
<tr>
<td>Fourth</td>
<td>1,966</td>
<td>82</td>
<td>90</td>
</tr>
<tr>
<td>Richest</td>
<td>3,850</td>
<td>89</td>
<td>94</td>
</tr>
</tbody>
</table>
climates, affects health. Poverty, and as a result, access to basic needs are high in rural and estate areas of Sri Lanka where health care facilities are also weak. About 45% of estate people and 40% of rural people are poor in the country (Government of Sri Lanka 2003c).

Districts where industrial employment is high also report higher death rate (Figure-19). Gampaha, Colombo, Kaluthara, Puttalam and Kurunagala districts, where the industrial employment is more than 5%, have the average crude death rate of 6.2. On the other hand, Nuwera Eliya, Mannar, Ampara, Kilinochchi and Batticaloa districts, with less than 2% industrial employment, have the crude death rate of 4.3. This relationship simply explains the fact that the lifestyle diseases contribute more to the crude death rate as the districts where the industrial employment is high would also have higher per capita income. At the same time, unemployment does not seem to be a contributory factor of crude death rate (Figure-20). These two relationships are rather surprising given that one would expect industrial employment to contribute positively to health status and therefore reduce the risk of death; unemployment is expected to be associated with higher death and poverty.

4.3.3 War

Conflicts can result in long-lived undesirable health outcomes and undernourished populations. In Sri Lanka, annually about 3,000–4,500 lives are lost due to war since 1983 (Arunatilake et al 2000). In addition, it is possible that the war disables an equal number of people and displaces about 12,000 people
every year. While a significant proportion of those injured may have to manage their disability throughout their lives, the displaced ones live in poverty and unhygienic conditions. The incidence of poverty is high in North East compared to the rest and about 12% of North East people reported change of residence due to war against 1% in the rest of Sri Lanka (World Bank 2002). On the other hand, bad health at an early age affects children throughout their lives.

**Figure-19. Industrial employment & crude death rate across districts**

**Source:** Central Bank of Sri Lanka 2004a, Department of Census and Statistics 2004a

![Graph](image1)

**Figure-20. Unemployment and death rate among districts**

**Source:** Central Bank of Sri Lanka 2004a, Nanayakkara 2004

![Graph](image2)

### 4.3.4 Tsunami disaster

Sri Lanka has been the badly hit by the Tsunami 9.0/2004 affecting about 5% of the Sri Lankan population extending to 13 districts of the island viz., Ampara, Batticoloa, Colombo, Galle, Gampaha, Hambantota, Jaffna, Kalutara, Killinochchi,
Matara, Mullaitivu, Puttalam, and Trincomalee. Tsunami alone has hiked Sri Lanka’s crude death rate by about 30% by killing 30,955 persons (another 5,637 are missing). Besides, it has injured 15,196 persons and displaced another 403,245 thus directly affecting 455,033 persons in the country (WHO 2005). It has also damaged 119,110 houses (78,199 houses were fully damaged). The correct number of deaths could be about 10-15% more than the reported figures as there is evidence that some of the dead bodies that have been buried by the community have never been counted (WHO 2005a). However, due to setting up of camps quickly and effectively along with provision of clean drinking water, camps have been free of epidemics, despite crowding and latrines (Grady 2005, Balachandran 2005). There are also no signs of impending outbreaks of serious disease in tsunami-hit areas (Detroit Free Press 2005).

District level damages to persons and property caused by the Tsunami are given in Table-7. Ampara alone has contributed about one-third to the death toll and one-fifth to the number of displaced persons. Hambantot, Galle, Mullativu, Batticaloa, Jaffna, and Matara are the other districts significantly affected by the Tsunami.

Tsunami has also affected the health care system. Some district health offices, hospitals, maternal and child health clinics, school dental clinics, drug stores, and staff quarters were wiped out; some staff members were also killed, and vehicles destroyed (Government of Sri Lanka 2005). Some of these facilities need complete reconstruction whereas some others need renovation. Certain others
Table-6. Damage caused by Tsunami across districts

Source: WHO 2005

<table>
<thead>
<tr>
<th>District</th>
<th>No. of persons</th>
<th>No. of</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Died</td>
<td>Injured</td>
<td>Missing</td>
</tr>
<tr>
<td>---------------</td>
<td>------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Ampara</td>
<td>10,436</td>
<td>120</td>
<td>876</td>
</tr>
<tr>
<td>Batticaloa</td>
<td>2,840</td>
<td>2,375</td>
<td>1,027</td>
</tr>
<tr>
<td>Colombo</td>
<td>79</td>
<td>64</td>
<td>12</td>
</tr>
<tr>
<td>Galle</td>
<td>4,214</td>
<td>313</td>
<td>554</td>
</tr>
<tr>
<td>Gampaha</td>
<td>6</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Hambantot</td>
<td>4,500</td>
<td>361</td>
<td>963</td>
</tr>
<tr>
<td>Jaffna</td>
<td>2,640</td>
<td>1,647</td>
<td>540</td>
</tr>
<tr>
<td>Kalutara</td>
<td>256</td>
<td>400</td>
<td>148</td>
</tr>
<tr>
<td>Kilinochchi</td>
<td>560</td>
<td>670</td>
<td>1</td>
</tr>
<tr>
<td>Matara</td>
<td>1,342</td>
<td>6,652</td>
<td>613</td>
</tr>
<tr>
<td>Mullativu</td>
<td>3,000</td>
<td>2,590</td>
<td>558</td>
</tr>
<tr>
<td>Puttalam</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Trincomalee</td>
<td>1,078</td>
<td>-</td>
<td>337</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>30,955</td>
<td>15,196</td>
<td>5,637</td>
</tr>
</tbody>
</table>
need to be re-located. In all, tsunami has fully or partially destructed 93 government health care institutions (Table-8) and total cost of destruction is estimated as Rs. 5.2 billion (US $52 million) (Government of Sri Lanka 2005a).

Table-8. Cost of damage to government health care infrastructure

<table>
<thead>
<tr>
<th>District</th>
<th>No. of affected institutions</th>
<th>Total cost of damage (Rs. million)</th>
<th>Average loss per institution (Rs. million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ampara</td>
<td>13</td>
<td>1,683.0</td>
<td>129.46 (1.30)*</td>
</tr>
<tr>
<td>Batticaloa</td>
<td>19</td>
<td>1,268.0</td>
<td>66.74 (0.67)</td>
</tr>
<tr>
<td>Colombo</td>
<td>5</td>
<td>22.5</td>
<td>4.50 (0.05)</td>
</tr>
<tr>
<td>Galle</td>
<td>22</td>
<td>425.0</td>
<td>19.32 (0.19)</td>
</tr>
<tr>
<td>Hampantot</td>
<td>5</td>
<td>22.5</td>
<td>4.50 (0.05)</td>
</tr>
<tr>
<td>Kaluthara</td>
<td>6</td>
<td>28.5</td>
<td>4.75 (0.05)</td>
</tr>
<tr>
<td>Kilinochchi</td>
<td>1</td>
<td>6.5</td>
<td>6.50 (0.07)</td>
</tr>
<tr>
<td>Matara</td>
<td>7</td>
<td>230.5</td>
<td>32.93 (0.33)</td>
</tr>
<tr>
<td>Mullativu</td>
<td>6</td>
<td>462.0</td>
<td>77.00 (0.77)</td>
</tr>
<tr>
<td>Trincomalee</td>
<td>9</td>
<td>1,059.5</td>
<td>117.72 (1.18)</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>93</td>
<td>5,208</td>
<td>56.0 (0.56)</td>
</tr>
</tbody>
</table>

* Figures in parentheses are million US dollars.
Although 13 districts were affected by the Tsunami, damage to health care infrastructure was restricted to 10 districts; three districts viz., Gampaha, Jaffna and Puttalam were spared. Average loss per institution is estimated as Rs. 56 million (range 4.5 – 129.46 million) or US $ 0.56 million (range $ 45,000 – 1.3 million). While the highest intensity of loss (Rs. 129.46 million per institution) was in Ampara district, the lowest (Rs. 4.50 million) was in Colombo and Hambantot districts. Galle district reported the highest number of affected institutions.

Survivors are generally in good health but many are grieving, having lost one or more relatives (Detroit Free Press 2005). Some of them may have to live with irreversible disabilities although no statistics are available on patients receiving minor and major injuries. Most of the seriously injured has succumbed while only the patients with minor injuries have been presented for medical care. Most tsunami victims had head injuries, cut, scrapes, bruises or broken bones, including compound fractures in which the bone sticks out through the skin. The hardest cases have been people who inhaled saltwater, which harmed the lungs and caused heart failure in some patients.

Majority of those displaced may leave camps to go back to their homes if they are reconstructed or not fully damaged, or to live with their relatives. But, many more have nowhere to go. For them, life in the camps will drag on for weeks and months. There is a potential threat to the survivors in the form of disease outbreaks, poverty, unemployment, and dependency. The threat of sickness looms because of the lack of toilets and because continuous availability of safe
drinking water cannot be assured, as flooding has contaminated many wells. All these together with the income loss make the people vulnerable to diseases such as diarrhea, cholera, typhoid, stress and psychosocial trauma. Already, cases of diarrhea have occurred, but camp records did not provide enough detail to tell if a deadly disease like cholera or typhoid are at work (Detroit Free Press 2005). Respiratory infections have also occurred but not in worrisome numbers.

About 5,000 Children who have lost one (4,000 children) or both (about 1,000 children) of their parents would have long term health effects, as they are unlikely to receive adequate social and health care. Women and children are the worst affected groups with children alone accounting for about 30-40% of the affected (died, missing, or displaced). The surviving children are living without either or both of their parents; among the children who lost at least one of their parents, about 12% lost both the parents, 55% lost mother and one-third lost father (WHO 2005a).

### 4.3.5 Lack of support facilities

Development of support facilities such as roads, transport and electricity are crucial determinants of returns to health care. Vaccines can become less effective, ineffective or even dangerous if they get too hot, freeze or exposed to light. Also, the ability to transport and store the vaccines thus determines the success of immunization. Similarly, roads and transport contribute directly to the disease burden. Nevertheless, road network contributes both positively and negatively to the disease burden.
Figure-21 brings out the relationship between road density per 100,000 population and crude death rates across districts in Sri Lanka. As it can be seen, crude death rate declines when the road density per 100,000 population increases. In other words, districts with higher road density in terms of population coverage report lower death rate. At the same time, as indicated by the Figure-22, an increase in road density per sq. km. geographic area results in higher death rate. While increase in road density in areas where population is scattered benefits the population by reducing the death rate and total cost of using health care services, its increase in areas where population density is high is not beneficial to the population in terms of health outcome.

Figure-21. Road density (km/100,000 population) & crude death rate in districts

Source: Central Bank of Sri Lanka 2004a

Figure-22. Road density (km per sq. km. area) and crude death rate in districts

Source: Central Bank of Sri Lanka 2004a
Inadequate and faulty supply of electricity is found to be a major handicap in many government health care institutions (Government of Sri Lanka 2003b). High voltage fluctuations come in the way of the functioning of the equipments in health care institutions. High humidity and dust also affect the performance of the equipments.

Development of technologies such as vaccines can work to improve health of all population irrespective of income. National income is strongly associated with child mortality and life expectancy. Higher income leads to better health outcomes. Better health, on the other hand, can result in improved productivity and better income. National endowments are also a strong determinant of health. For instance, areas conducive to mosquito survival have great difficulty in combating malaria. Similarly, widely dispersed populations serve as constraints to better health care provision.

### 4.3.6 Poor governance

Governance affects the public sector efficiency and improves the access to health care for the population. Famines are caused as much by human factors as by nature. A drought combined with misguided policies and poor governance can result in food shortage. Managing public health expenditure can determine the effectiveness of translating the expenditure into health outcomes. Decentralized governance can be a powerful tool to improve health through efficient and responsive health care service (Varatharajan et al 2004).
Ineffective and inaccessible health care services raise the effective price of health care resulting in high mortality and lower health status. Health care institutions lacking basic skills and facilities could also prove to be dangerous, as they cause higher mortality. Absorbing the burden of unpredictable large health expenditure through a pre-paid financing mechanism such as health insurance can reduce impoverishment through which undesirable health outcomes.

In Sri Lanka, overall level of satisfaction about the functioning of the health care system seems to be high (Government of Sri Lanka 2003b). However, there are areas where there is scope for improvement. First of all, people are not aware of facilities existing at various levels of government institutions (NCMH 2004a). Monitoring and supervision of government health care institutions are not strong and hospital development committees are not powerful enough to intervene appropriately. Some of the facilities are limited to higher level institutions only at the cost of care at the lower level institutions. Doctors are not good enough to deal effectively with the public, so that they can practice them when they work as physicians.

Needs assessment is not carried out by the government and so, the services some times do not match people’s needs. Many village level facilities are manned by RMOs do not have M.B.B.S. doctors. As a result, the villagers are forced to rely on private doctors if they want to seek care M.B.B.S. doctors. Emergency preparedness if weak even in district hospitals. The staff strength has increased without necessarily adding services to the people and dominance of
administrators in the functioning of health care institutions is increasing without helping to enhance the efficiency. In fact, increasing role for administrators only increased corrupt practices.
5. HEALTH SYSTEM SCENARIO

Sri Lanka is known as a country with modest economic growth but phenomenal health achievements. While economic progress and re-organisation and social policies played a role in attaining higher health status and making it fairly uniform, the role of health care system can not be discounted.

5.1 Past achievements

Sri Lanka recognised quite early the importance of government role and higher spending on health. Sri Lankan government spent about 2% of GDP on health during the 1950s and 1960s (WHO 2002b, Sanderatne 2000). Higher government spending on health was transformed into better health care infrastructure. The expansion and improvement of health care infrastructure was largely responsible for the decline in mortality and improved health status. In fact, decline in crude death rate coincided with the development of health care facilities in the country during the 1930s. The number of hospitals increased from 112 in 1930 to 153 (36.6% increase) in 1945 (Sanderatne 2000). The number of beds rose from 9,477 to 15,650 (65.1%), doctors from 341 to 514 (50.7%), assistant medical practitioners from 409 to 548 (34.0%), and nurses from 605 to 1,165 (92.6%) during the same period. Maternity homes were newly established during 1940s. As a result, nearly half of the births were attended by health care delivery staff by 1950. By 1939, Sri Lanka’s success in the control of infectious diseases was remarkable. Spraying of houses with DDT solution alone was responsible for a 29.2% decline in crude death rate in 1946-47.
There has been a 25.2% increase in the number of government hospitals during the 25-year period from 1978 to 2003 (Central Bank of Sri Lanka 2004). Strength of doctors too increased by 180.9%, nurses by 170.9% and beds by 53.3%. As a result, average bed size of a government hospital increased from 83 in 1978 to 102 in 2003 and population served by a doctor (including AMO) declined from 4,130 to 1,999. Bed-doctor ratio too declined from 11.7 to 6.4. Similarly, bed-nurse ratio declined from 6.5 in 1978 to 3.7 in 2003. The present status of Sri Lankan health system is given in Box-5.

---

**Box-5. Sri Lankan health system – 2003**

*Source:* Central Bank of Sri Lanka 2004a

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy (Years)</td>
<td>73</td>
</tr>
<tr>
<td>Crude birth rate (per 1,000 population)</td>
<td>19.1</td>
</tr>
<tr>
<td>Crude death rate (per 1,000 population)</td>
<td>5.8</td>
</tr>
<tr>
<td>IMR (per 1,000 live births)</td>
<td>16.0</td>
</tr>
<tr>
<td>Total health expenditure (Rs. Billion)</td>
<td>56.32</td>
</tr>
<tr>
<td>Per capita (Rs.)</td>
<td>2,925</td>
</tr>
<tr>
<td>% of GDP</td>
<td>3.2</td>
</tr>
<tr>
<td>Govt. spending (Rs. billion)</td>
<td>27.5</td>
</tr>
<tr>
<td>Per capita (Rs.)</td>
<td>1,428</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>% of GDP</td>
<td>1.56</td>
</tr>
<tr>
<td>Private spending (Rs. Billion)</td>
<td>28.82</td>
</tr>
<tr>
<td>Per capita</td>
<td>1,497</td>
</tr>
<tr>
<td>% of GDP</td>
<td>1.64</td>
</tr>
<tr>
<td>Share of health in Govt. employment (%)</td>
<td>15.1</td>
</tr>
<tr>
<td>Share of health HH consumption (%)</td>
<td>3.3</td>
</tr>
<tr>
<td>Population served by a</td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td>31,821</td>
</tr>
<tr>
<td>Govt. bed</td>
<td>263</td>
</tr>
<tr>
<td>Govt. doctor</td>
<td>738</td>
</tr>
<tr>
<td>Western medicine</td>
<td>2,308</td>
</tr>
<tr>
<td>AMO</td>
<td>14,935</td>
</tr>
<tr>
<td>Ayurvedic</td>
<td>1,170</td>
</tr>
<tr>
<td>Govt. nurse</td>
<td>1,152</td>
</tr>
</tbody>
</table>

Reasonably good economic conditions permitted the expansion of health care facilities after the independence. About 7% of GDP was spent on health,
education, housing and food; health alone received 2.5% of GDP (Central Bank of Sri Lanka 2004a). The combined spending on health, education, housing and food increased to 10.5% of GDP in 1961-65. However, share of health has marginally declined to 2% during that period. Higher spending on health enabled further expansion of health care facilities. As a result, although population grew faster during the 1950s and 1960s, health care facilities improved still faster resulting in improved per capita access to health care facilities. Births attended by skilled personnel increased from 53% in 1960 to 93.9% in 2000 (Figure-23) (WHO 2003b). As a result, maternal deaths declined significantly during 1960-2000. This case stands as a clear example to indicate the gains of health system intervention and investment.

Figure-23 . Assisted births and their impact on maternal health

Source: WHO 2003b

Trend in assisted deliveries

Impact on maternal deaths

Percentage of mothers who have undergone antenatal check-up is uniformly high in metro, urban, rural and estate areas of Sri Lanka (Department of Census and
Statistics 2002). It is also high among illiterates and semi-literates. About 93% of deliveries occur in institutions while another 2% are attended by trained professionals. Similarly, proportion of fully immunised children is 81% in Sri Lanka. Percentage of breast-fed children is uniformly above 96% in urban, rural and estate areas although the proportion is slightly higher when the delivery occurred at an institution. Mean birth weight in Sri Lanka is 2.9 kg and about 17% of children are under-weight. Mean duration of breast-feeding in 2000 was as high as 27.5 months in Sri Lanka up from 22.7 months in 1987. Mean duration of exclusive breast-feeding has also risen from 1.2 months in 1993 to 3.7 months in 2000.

Improved access to health care facilitated further population growth necessitating higher spending on health care because size and density of population increased. While it was challenging for the health care system to treat a bigger population, it laid the foundation for higher economic growth during the 1980s and 1990s because the survived children of 1950s and 1960s became productive adults and assets for the country in 1980s and 1990s.

Figure-24 exhibits the achievements of Sri Lanka’s health care system. In the figure, higher the un-shaded portion lower the achievements and vice versa. But, as it can be seen, the radar has about one-third shaded portion and two-third un-shaded suggesting that the country’s health system is under-achieving to the extent of about 65%. Areas for further improvement are overall life loss due to
illness, reduction in IMR and under-5 mortality. Also, the country’s health care financing has greater scope for improvement.

**Figure-24. Health system achievements in Sri Lanka (2002)**

*Source: World Bank 2004a*

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### 5.2 Financing of health care

Financing of health care is almost equally shared by the government and the private households. While government funding is mostly concentrated in inpatient/hospital facilities, private funding is used for outpatient visits, diagnostics and purchase of medicines. Total health expenditure in the country in 2003 is estimated as Rs. 56.32 billion (US $ 0.56 billion) yielding a per capita health spending of Rs. 2,925/- (US $ 29.25/-). Overall per capita health spending increased at an annual rate of 5% during the 1990s (Government of Sri Lanka 2002b).
5.2.1 Government financing

Government expenditure on health as percentage of GDP was 1.1% in 2004 (Central Bank of Sri Lanka 2004). It has declined from 1.6% in 1978. Share of government expenditure was well above 2.0% of GDP during late 1950s and the trend continued till late 1960s (Figure-25). Government expenditure on health closely followed government expenditure on education during 1950-2003 (Figure-26). Whenever share of education increased, health’s share too increased and vice versa. But, share of health never exceeded that of education. Since early 1970s, the share of both have been gradually declining.

Figure-25. Government health expenditure (1950-2003)
Source: Central Bank of Sri Lanka 2004a

Figure-26.27 Govt. expenditure on health and education (1950-2003)
Source: Central Bank of Sri Lanka 2004a

A simple plotter of the growth of GDP and share of health in government expenditure as percentage of GDP (Figure-27) shows that the share of health in government expenditure remained static irrespective of the GDP growth. In fact,
the share of health appear to have declined with the acceleration of GDP growth. Health shared 2.25% of foreign funds in 2003, 13.7% increase over 2002; however, it is far less than the share of 5.2% in 1999. Utilisation of foreign funds is also poor in health sector; the rate of utilisation stood at 15.2% in 2002 compared to 67.1% in 1999 and the national average of 64.2%.

Figure-27. GDP growth Vs Government health expenditure in Sri Lanka

Source: Central Bank of Sri Lanka 2004a

During 1978-2003, population increased by 35.7% and government had an increasingly larger size of infrastructure to maintain; government hospitals increased by 25.2%, beds by 53.3%, doctors by 180.9% and nurses by 170.9%. Moreover, health sector is the second largest government employer in Sri Lanka accounting for 15.1% of the country’s government staff (Government of Sri Lanka 2004). Although health sector employs every sixth government employee, health’s share in the total budget was a mere 3.04% in 2004 and in government recurrent expenditure was 4.36%; its share in capital expenditure was 1.74%.
Share of inpatient care in government spending increased from 29% in 1990 to 41% in 1997 (Government of Sri Lanka 2002b).

5.2.2 Private financing

Private spending is mostly household out-of-pocket spending with employer spending accounting for one-tenth and commercial insurance and NGOs’ spending together accounting for about 1-3% (Government of Sri Lanka 2002b). Private households spend 3% of their household budget on health (Box-3). Private spending on health has increased from Rs. 5.6 billion (US $ 56 million) in 1990 to about Rs. 28.82 billion (US $ 0.28 billion) in 2003 (Central Bank of Sri Lanka 2004a, Government of Sri Lanka 2002b. Private spending as percentage of GDP remained relatively constant despite a substantial increase in some areas of private spending (Government of Sri Lanka 2002b). This is due to compensating decline in household spending on traditional medicine.

Private expenditures are mostly incurred in pharmacies and other retail outlets. The other significant component of private expenditure is the consulting fee, which accounts for 29% of all private spending in health.

5.3 Physical infrastructure

For Administrative purposes, Sri Lanka is divided into 8 provinces and 25 Districts. Health care is provided by both public and private sectors although the former is predominant in providing inpatient care.
5.3.1 Public sector

The Government of Sri Lanka provides comprehensive health care to the population of Sri Lanka, through a network of preventive and curative health care facilities. There are 605 inpatient facilities comprising of 15 Teaching Hospitals, 6 Provincial Hospitals, 36 Base Hospitals, 157 District Hospitals, 109 Peripheral Units, 175 Rural Hospitals, 10 Estate Hospitals and 97 other hospitals. In addition there are 406 Central Dispensaries which provide only out-patient care. There is a network of 276 Health Units ('Medical Officer of Health' Offices) providing promotive and preventive health services through domiciliary and clinic care. The plantation estates have run their own facilities for their employees, but in the late 1990s a decision was made to integrate them into the public sector. Nevertheless, the process is not yet complete.

Public sector is the major provider of health care in the country accounting for 54% of ambulatory care and about 97% of in-patient care. During 1978-2003, population increased by 35.7% whereas government hospitals increased by 25.2%, beds by 53.3%, doctors by 180.9% and nurses by 170.9%. Coverage of a government bed varies between 204 persons in Colombo district and 588 persons in Vavuniya district (Figure-28); the distance from the best district is 14.3% for Kandy district whereas it is 65.3% for Vavuniya. Similarly, population served by a government doctor varies between 873 persons in Colombo district and 40,000 persons in Mullativu (Figure-29); the distance to cover for the districts to catch up with the best varies between 16.0% for Kandy district and 44.8 times
in Mullativu. The trend shows that disparities in the availability of medical doctors within and between provinces have widened during 1981-94 (Gunatileke et al 1998).

Figure-28. Distribution of government beds (2001)

Source: WHO 2003a
Four districts viz., Colombo, Kandy, Gampaha and Galle account for 63.5% of the specialists in the country leaving only 36.5% for the rest 84% of the districts. Specialists don’t exist in Kilinochi, Mannar and Mullativu districts whereas they exist in small numbers in Ampara (1 per 3,00,000 people) and Nuwera Eliya (1
per 1,40,000) districts (Figure-30) (Central Bank of Sri Lanka 2004a). At the same time, Colombo has 195 specialists at the rate of 1 per 11,500 population,

**Figure-30. Distribution of specialists (2001)**

**Source:** WHO 2003a
Galle has 69 @ 1 per 14,300, and Kandy has 87 @ 1 per 14,600. The difference between the best and the rest ranges between 25.2% for Galle and 24.7 times. Similar trend is observed in the case of nurses too (Figure-31). Each government

**Figure-31. Distribution of government nurses (2001)**

*Source: WHO 2003a*
nurse serves about 10,000 population in Kilinochchi and Mullativu districts but only 52 persons in Kandy.

The difference between the best and the rest is 12.9% in Colombo and 17.1 times in Kilinochchi districts. A Public Health Midwife serves 15,250 people in Mullativu whereas she serves 1,840 persons in Moneragala. The difference between the best and the rest here is 21.7% in Kegalle and 7.3 times in Mullativu districts. Same trend continues for other government personnel such as Public Health Inspectors, nursing sisters, pharmacists, lab technicians, and other technicians.

5.3.2 Private sector

Private sector, which played minimal role till 1980s, plays a significant role now servicing 46% of the ambulatory care and 3.4% of inpatient care (IPS 2004). About 59% of private ambulatory care is provided by government physicians and specialists, 22.2% by private general practitioners and 13% by traditional practitioners (Government of Sri Lanka 2002a). Growth of private ambulatory care is due to reintroduction of private practice by government doctors, liberalization of drug imports, and deficiencies in government health care institutions.

The number of private hospitals increased by 46% while that of private beds increased by 41% during the 1990s (IPS 2004). However, a vast majority (69%) of private hospitals are situated in the Western Province whereas the remaining 7
provinces account for 31% of the private hospitals. There is no indication for correcting this inequality in future because 84% of the current private capital investments in health are concentrated in the Western Province. Other private facilities such as blood banks, scans and MRI units are also concentrated in the Western Province. However, there is little or no information on the exact facilities such as staff, equipments, etc. in the private health care institutions. Client views about the private sector institutions are also non-existent.

The bed turnover rate of the private hospitals increased from 46 in 1990 to 54 in 2001 suggesting that the intensity of use of private hospitals has been on the rise during the 1990s. As a result, the estimated revenue of the private hospitals increased from Rs. 375 million (US $3.75 million) in 1990 to nearly Rs. 3.3 billion (US $33 million) in 2001. The private hospital revenue as the share of GDP doubled during the 1990s to reach 0.2% of GDP in 2001 (IPS 2004, Hsiao 2000).

5.3.3 Health seeking behaviour

When confronted with illness, people tend to indulge in six types of treatment such as self-treatment, ritual, allopathic, ayurvedic, homeopathy and acupuncture (Government of Sri Lanka 2003a). People are interested in natural ways of treatment and packed ayurvedic preparations serve as one of the home/natural remedies. People tend to seek home remedies first before contacting formal health care institution (NCMH 2004a). Every fourth patient seeking formal health care would have tried self care or home remedy first before reporting at the
formal institution (Government of Sri Lanka 2003b). The proportion is still higher for those seeking outpatient care.

About 40-50% of outpatients seek care from private providers (IPS 2004, NCMH 2004a, Government of Sri Lanka 2003b). About half of them use the private sector exclusively and the other half mix both government and private sectors. Even about 50-70% of those using public sector are forced to buy drugs and supplies and undergo diagnostic tests in the private sector. People use private sector for minor ailments, investigations, late evening care and as a first aid option. Over 94% of those seeking care use allopathic system of medicine, 5% use ayurvedic and the rest use homeopathy/acupuncture (Government of Sri Lanka 2003b).
RESULTS OF FOCUS GROUP DISCUSSIONS, WORKING GROUPS AND COMMISSIONED STUDIES

This chapter reports the results of the working group deliberations and the studies commissioned by the National Commission on Macroeconomics and Health. It also brings out the results of the focus group discussions conducted specifically for the purpose of this report.

5.4 Focus group discussions

A series of 27 focus group discussions (FGDs), covering 4 provinces, 6 districts, about 2,000 km and a population of about 6.2 million, were conducted to elicit information on the problems concerning the Sri Lankan health system and possible measures to overcome them (NCMH 2004a). The FGDs covered 261 stakeholders such as the community (leaders and members), patients (indoor and outpatients), doctors (western and ayurvedic), nurses, public health midwives, pharmacists, lab technicians, Public Health Inspectors (PHIs), school teachers, medicine, nursing and PHI students, nursing and midwifery teaching faculty, and members of Non-Government Organisations. The average size of the group was 9.7 (range 4-15) and average time taken per group was 64.6 minutes (range 40-180 minutes). The consolidated results of the FGDs are given here.
5.4.1 Health issues

Absence of toilets and environmental hygiene, poor quality of drinking and other water, inadequate/ineffective drainage, improper dumping of garbage, mosquito menace and alcoholism were identified as the major causes of illnesses in the community. Alcohol and heroin use is very high among unemployed youth and children of the parents (especially the mother) settled abroad. Alcohol induced domestic violence alone accounts for about 30% of hospital admissions and 3-5% of outpatients. It equally affects men and women. Lifestyle related diseases are also on the rise. Even small villages report 5-10 known HIV cases, 5-10 cancer cases and innumerable diabetes, hypertensive and cardiovascular cases.

Child health

Child nutrition is a major problem. School children go to school without breakfast and their lunch box does not contain nutritious food. Some children (especially the grown up) don’t even drink enough water. All these greatly affect their health and about 1% of the school children faint in the school every day. Lack of adequate physical exercise is another problem affecting the school going children. Physical training in the school is very limited and even if it happens, is ineffective as students don’t even go out of the class during physical training classes. Dental hygiene of children is another area that requires attention. Children of mothers employed abroad receive little or no social and health care. Sexual abuse, teenage pregnancy, drug and alcohol use are the health
outcomes of this. Teenage pregnancy accounts for about 5.4% of all pregnancies in some populations.

*Poverty related illnesses*

Level of poverty is high among a significant section of the rural population. Unemployment is one of the major causes of poverty. Unemployed youth are addicted to heroin and alcohol addiction as they don’t have anything else to do. Due to extreme poverty, people are left without toilets and whoever had toilets earlier are not in a position to maintain them now. Badly maintained, broken or filled toilets serve as a mosquito breeding place. Waste management is also poor among this population. Some NGOs collect the waste from the people. But, there is no transport to take them away. Public authorities collect the wastes but don’t know how to treat them. As a result, they dump them in public places causing illnesses. Houses lack enough ventilation and therefore, are vulnerable to certain diseases such as TB.

5.4.2 Production of human resources

*Doctors*

Medical schools are trying to follow a modular curriculum, which is not uniform across medical schools in the country. Modular format requires the students to get affiliated to a hospital from the beginning. However, students were not involved in the process of curriculum revision. Some topics such as biochemistry and forensic medicine are too stuffy both in terms of quality and quantity so much
so that the students felt the subjects ‘irrelevant’ to them. At the same time, important subjects such as anaesthesia receive inadequate attention and their teaching is also left to the convenience of the teaching faculty. Geriatric care is also not taught to the students.

There is no link between various subjects taught. Some subjects like pharmacology are taught early but their application is not taught and when its application is known and required later, the subject is forgotten. On the other hand, topics such as projects are undertaken before even teaching research methodology. As a result, projects are of poor quality and do not serve the purpose for which they are intended.

Clinical exposure is not uniform across the medical schools and is sub-optimal in case of anatomy, physiology and biochemistry. Whatever clinical exposure is provided is forgotten as the students approach the (theory) exams. The major policy question is whether to spread or concentrate the clinical aspects. If they are spread, as it is proposed, students are confused about their role in the hospital and do not feel confident about what they are doing as there is no theoretical foundation. Given this, what can they learn? Moreover, when consultants ask questions about the patients’ health, they are not in a position to answer them.

Course evaluation and exam are not balanced enough to include clinical aspects and every bit of evaluation concerning the clinical aspects happens during the final year. Weight for clinical aspects in the evaluation (70% in Peradeniya, 50%
in Karapitiya and 30% in Colombo) and standard of evaluation are not uniform across the universities. While Colombo University students follow the same patient for the exam, which is conducted concurrently, students from Peradeniya get unknown patients and write exam at one stroke in the end. It is easy to score if the exam is conducted concurrently and spread throughout the course.

About 75% of university resources are spent on staff salary and the university is overstaffed. Only 5-10% is spent on students. This imbalance needs to be corrected. Quality of teaching is uneven across the subjects. There are good quality teachers for some subjects while for some others, they are of mediocre quality. Teaching facilities such as electron microscope and well qualified faculty members are centred in Colombo.

New editions of the text books are not available and the students are forced to read the old editions. Even if they are available, they are available in inadequate number; one book is shared by 180 students. There are also only limited variants of books on the same topic. Teaching materials are also not circulated to the students. Journals are not available consistently. They are bought whenever resources are available.

Students are required to prepare numerous project reports but are not provided with computers to prepare them. It takes more than 2 years to ‘prepare’ newly bought computers for student use, and we need to spend on photocopying of the same. There are designated ‘teaching hospitals’ but they lack essential facilities for the students. There is no continuing medical education for doctors. Although
medical officers of health (MOH) receive some training constantly, topics such as prevention of lifestyle diseases are not covered.

_Nursing_

There are 11 nursing schools in the country but are not affiliated to any university. Facilities at the nursing schools greatly vary but many of them lack essential facilities such as manageable class size, good library, well equipped laboratory, computer, vehicle, and hostel. Class size is too big (140-250) to impart any meaningful training. Admissions too vary from year to year, across the schools, and across batches even within the same year. There is no staff development programme for the nursing teachers to update their skills.

Nursing students felt that there is no active learning and mentoring of students. The entire nursing education (midwifery, basic and post-basic nursing) is provided in training mode and no graduate degree is given to the trainees. Admissions, curriculum, teaching quality and academic culture are made to suit the training mode. The course syllabus is 20 year old and so, does not include handling of new technologies such as ventilator, syringe pumps, computers, etc. A majority (about 75%) of nurses working in the operation theatres lack appropriate training. There is also a demand to include midwifery as part of nursing curriculum. Another limiting factor cited by the nursing students and the practicing nurses is the absence of English teaching and teaching in English.
Nurses serving *ayurvedic* institutions are all trained in western medicine. They are absorbed in *ayurvedic* institutions after 6 months’ training in ayurveda practice. Public health midwives felt that they are short in the knowledge on hypertension, cancer and some basic medicines.

*Lab technicians*

The country has about 25% shortage of lab technicians and needs 300 more lab technicians to be trained to meet the demand. Like nurses, they also receive only professional certificate, not a degree, after 2 years of training. The syllabus was framed in 1959 and the test procedures are also old. The major demand is to extend the duration of the course by 6 months to include clinical chemistry in the curriculum. Since their clinical training is very limited, they are not in a position to write any clinical history in their lab reports of the patients. They also need computer training as they are required to use computers extensively. The class size (30-40) is optimal. There is no opportunity for continuing education for lab technicians and whatever information on the short term fellowships exists does not reach them.

*Pharmacists*

There is no separate pharmacy council in the country. Like nursing and lab technician training, pharmacy training is also restricted to certificate level and there is no scope for higher studies. Their knowledge on the drugs is also not updated to include the new drugs. There are two types (full time and part time) of
training available in the country. Like in the case of ayurvedic doctors, those undergoing part time training are not allowed to join the government. Hence, there exists a dualism in quality in public and private sectors. Part time students also suffer from lack of syllabus, faculty and lab access. Their lab training is restricted to a few demonstrations by their hired tutors.

Public Health Inspectors

Like other allied staff, PHIs too don’t receive any degree at the end of the training (1.5 years) and there is no post-basic training as in the case of nurses. The duration and therefore, the curriculum is perceived to be short. The demand is to extend the course to 3 years. English and computer (AutoCAD) training are inadequate.

Training facilities are limited. There is no fulltime faculty member to teach and the entire course is taught using the hired faculty. Access to computers, books, transport, hostel, photocopying and lab is limited. Tamil language training is a pre-requisite for the course but not provided adequately. Expensive (Rs. 10,000) drawing instruments are not provided.

5.4.3 Structural issues

Treatment seeking

The sequence of care for various illnesses is home remedies first, private practitioners next and district hospital last. People are interested in natural ways
of treatment and packed *ayurvedic* preparations serve as one of the home/natural remedies. But, they face two problems here. First, they are not taught by anyone about the home remedies and so, they are not sure whether what they are doing is right or wrong. Second, people are not in a position to know about the quality of the packed *ayurvedic* preparations. Hence, people expect two things from the government to address these issues. First, they want the government to inform people about various home remedies wherever applicable and second, the government should evolve a certifying mechanism to vouch for the quality of the packed preparations. People also use over-the-counter mechanism to get drugs. Medical students practice with someone else’s name board. Other types of less than fully qualified practitioners too exist.

*Access to care*

Diseases of elderly people are not adequately addressed especially by the lower level facilities. They don’t even know where the facilities are available and are made to shop around to seek appropriate care. Similarly, people travel more than 12 km for delivery and inpatient care; some people (those in estates) even travel up to 40–60 km.

About 50-85% of population uses the private health care institutions. While a significant proportion (about 25-40%) uses the private sector exclusively, others use both government and private sectors. Even about 50-70% of those using public sector are forced to buy drugs and supplies and undergo diagnostic tests in the private sector. People use private sector for minor ailments, investigations,
late evening care and as a first aid option. Cited reasons for using the private sector are given in Box-6.

<table>
<thead>
<tr>
<th>Box-6. Reasons for using the private sector</th>
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<tr>
<td><strong>Source:</strong> NCMH 2004a</td>
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<tr>
<td>• Absence of qualified doctors in lower level institutions, insufficient access to specialists, lack of essential facilities such as drugs and diagnostics, long waiting time, limited time spent by the doctor with the patients, staff strike, and lack of cleanliness in government health care institutions.</td>
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<tr>
<td>• Government doctors themselves advise the patients to go to the private sector to get the diagnostic tests done ‘quickly’.</td>
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<tr>
<td>• Reconfirmation of tests carried out in public health care institutions</td>
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<tr>
<td>• High transport cost</td>
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Patients and community members are of the opinion that it is cheaper to go to the private sector than going to the public sector institution. They reason this by saying that they need to spend up to Rs. 300/- or US $ 3/- (Rs. 250/- or $ 2.50/- on drugs and Rs. 50/- or $ 0.50/- on transport) if they went to a government facility whereas they required only Rs. 100 - 120/- (US $ 1 - 1.20/-) if they went to a private facility. Also, the major difference between the public and private facilities is that the private doctors ‘talk’ to the patients. It is easy to meet and talk
to the government doctors during their private practice than in government facilities. Also, it is often easy to go to a higher level institution than going to a nearest lower level institution due to transport bottlenecks. Utilisation of paid facilities (private sector and canteen inside the government institutions) is distinctly low among the female population.

Ayurvedic institutions serve mainly elderly, female and chronic patients. Delivery, paediatric and surgical cares are not provided in a big way. Ayurvedic doctors complained that public health midwives advise their clients not to go to ayurvedic institutions for treatment. Ayurvedic specialists don’t come out of Colombo because there are very few specialists in the country and because opportunities for private practice are poor elsewhere. There is no formal referral mechanism between western and ayurvedic sectors. However, ayurvedic hospital relies on the western medicine hospital (government and private) for diagnostics whereas the later send chronic and incurable patients to ayurvedic hospital.

Availability of facilities

BP apparatus, refrigerators and weighing scale in midwives’ clinics are either non-existent or are very old. There is no adequate facility for conducting clinics for midwives. They often use make-shift facilities such as temples, schools, etc. However, there are no refrigerators to store medicines. De-addiction drugs are not provided in government institutions. The supply of ‘thriposa’ nutritional supplement to pregnant women, lactating mothers and under-5 children is inadequate. In fact, this was cited as the single-most complaint about the PHMs’
work. In addition, elderly people require certain specified items such as specs and hearing aids.

Chlorine is not available and the tablet to test the chlorine content is also not available. Bottles to collect water samples and laboratory to test the water samples or transport facility to transport them to the existing laboratory do not exist. Food sample kits are not provided to us. Even when available, there is a limit samples due to limited lab capacity.

Overall drug supply is inadequate. State Pharmaceutical Corporation supplies drugs to even private pharmacists. Some private (about 26) companies too supply the drugs. There is drug smuggling from India. As a result, some pharmacists are able to sell the same drug (same brand) at a lower price. Drug storage facilities are poor in private pharmacies and they are forced to sell ineffective drugs. Even certain government facilities don’t have adequate storage facilities. Supply of raw materials required to produce ayurvedic drugs is inadequate. Quality of raw materials supplied is also not known. It could be inferior.

Lab facilities vary quite a lot across various types of institutions. Lower level institutions struggle to provide even five types of lab services while the higher level institutions are in a position to offer about 25 services. Lab instruments are also quite old and need to be replaced.
Given the present level, pattern and spread of demand, bed size is grossly inadequate in some facilities whereas it is in excess of the requirement in some others. In some institutions or departments within the same institution, one bed is shared by 2-3 persons. There is a need to streamline the bed-nurse ratio across hospitals with appropriate correction for certain type of care such as intensive care. Overall bed-nurse ratio could be 5.

*Price of care*

About 50-85% of people use the private sector. While half of them go to the private sector directly, the remaining half is forced to use the private sector due to government sector’s inability to provide certain facilities. Those who go directly pay about Rs. 80 - 250/- (US $ 0.80 – 2.50/-) per visit towards consultancy fee and the cost of medicine. Cost of medicine is approximately one-third of the payment made to the private doctors. *Ayurvedic* drugs are 10 times expensive compared to the allopathic drugs. However, their quality is questionable. Those reach the private sector through the public sector spend about Rs. 30–200/- (US $ 0.30 – 2.00/-) on the purchase of drugs and other materials and Rs. 175–4,000/- (US $ 1.75 – 40.00/-) on various laboratory tests.

All those using the public sector incur travel cost to reach the health care institution. They spend about Rs. 10 – 40/- (US $ 0.10 – 0.40/-) in case of outpatient care and about Rs. 20–600/- (US $ 0.20 – 6.00/-) in case of inpatient care. People are willing to pay if government creates any new facility at the lower level and charges nominally for the new facility. Due to higher or unaffordable
price of drugs, they are compelled to discontinue the drug consumption and end up consuming insufficient dosage. Mosquito menace also cuts into the family budget as people spend significant proportion of their on mosquito coils.

Financing

Those who cannot finance the high-expensive care, they leave to ‘The God’, as they we cannot do anything about it. Next to God is ‘The President’s Fund’ for some people who have access to it. All the non-expensive (up to Rs. 1,000/- or US $ 10.00/-) care is managed from their private money.

5.4.4 Functional issues

Bypassing of facilities

People tend to bypass the lower level facilities due to various reasons. First, they feel that more attention is given to higher level institutions. Lower level institutions give ‘slips’ (prescriptions) whereas higher level institutions deliver ‘goods’ (medicines). Second, higher level institutions are in a position to provide them one-stop shopping of all facilities. Facilities such as laboratories are either non-existent or not functioning well at the lower level. Moreover, any complications would be attended to immediately in these facilities. Third, doctors don’t stay in lower level institutions. Bypassing can be reduced if the doctors stay there. Fourth, staff of lower level facilities themselves sends the patients to higher level facilities. Fifth, people don’t know about the facilities available at various levels of government institutions and therefore, indulge in facility
shopping. Private practice of government doctors is taken as a route to access higher level institutions as they channel the patients to these institutions. Patients believe that they get greater attention if they are referred by government doctors.

Lower level institutions such as the MOH clinics, although lack certain crucial facilities, are well conducted and very useful for ante-natal care; therefore, they are well attended. However, some community members mentioned that they need to go to two places for antenatal care because higher level institutions eventually used for deliveries insist at least 3 antenatal visits.

**Public health**

Mosquito spraying, used to be undertaken earlier, is not done now. Lack of funding is the reason given by the health care delivery staff. Environmental issues, once brought out by the Public Health Inspectors, are left out of their task now. One of the reasons cited by the PHIs is the lack of interest among the MOH. Men are excluded from the public health care. Even if they are involved, it is related to his wife’s/child’s health.

**Utilisation of beds**

There is an inter-hospital difference in the utilisation of beds. Higher level facilities such as teaching hospitals, general hospitals and base hospitals are over-utilised whereas lower level facilities like rural hospitals and peripheral units are under-utilised. About 10-30% of inpatients treated in higher level facilities can be treated in facilities that are at least one level below them. In addition, about
10% of inpatients probably may not require hospital admission at all. There is also intra-hospital difference. Even within the same hospital, some beds are over-utilised (about 200%) while some others are under-utilised (0-30%). Similarly, about 30% of outpatients accessing higher level facilities can be treated at a facility at least one level below while about 30% may not require treatment at all.

_Dual standard_

Different standards are set for private and government sectors especially in the case of _ayurvedic_ doctors, and pharmacists. While the government _ayurvedic_ doctors are degree holders, private doctors are diploma holders. Diploma holders learn their subjects on their own and are not even allowed to go for training in government _ayurvedic_ institutions, except in one (Sabaragamuva) province. Similarly, private pharmacists go through a different stream of training.

_Quality of care_

The quality of care has declined considerably over a period of time. Government health care facilities give only two drugs for every illness. Even government doctors themselves say that government does not have money to buy medicines. As a result, people are losing faith in government health care facilities.

Public facilities don’t refer records or check with the patients before initiating any treatment. Doctors even start writing the prescriptions even before talking to the patients. This is mainly due to the over-crowding of the out-patient facilities. The
attitude of the health care delivery staff is also not good. Some pharmacists even throw the drugs at the patients.

Each private drug supplier supplies different brand of the same drug. Since doctors use brand names in their prescriptions and write ‘no substitute’, pharmacists need to stock all the brands of the same drug. Since outdated drugs cannot be returned to the suppliers by government order, it is a big loss for private pharmacists. There is a practice of bulk drug purchase in both government and private sectors. Some drugs get spoilt or become ineffective once the box is opened. In the process, the quality suffers. Once, aspirin was withdrawn from the market because of poor quality and this has led to shortage of aspirin. The available substitute was ineffective. Some drugs freely distributed by the government go out of stock. But, the patients suffer because we (the private pharmacists) are not in a position supply those drugs to them.

New infections are caused by sharing of beds. While patients come to the hospital to receive treatment for some diseases, they get fresh ones when they are about to get discharged. So, their stay gets extended due to newly acquired infection. Follow-up of children after medical check up when it happens is poor. Mothers are uninterested and health care delivery staff too does not follow it up.

*Human resource management*

Nurses follow shift system but other related staff such as radiographers, and lab technicians don’t have shifts. These facilities are not available during certain
shifts and so, the functioning of nurses is restrained. Moreover, there are not enough support staff for the nurses. The optimal number of support staff, as suggested by the nurses, is 3 per unit. Population-based distribution of the PHM staff is not correct. Distance travelled and availability of support facilities such as local transport should be taken into account.

Strike by government employees is identified as the single-most constraint faced by the people while accessing the government health care institutions. They felt that the government should evolve a mechanism to settle the dispute with the employees without affecting the work.

5.4.5 Policy prescriptions

Access to care

Ideally diagnostics and outpatient treatment should be in peripheral areas and specialised care should be provided in urban areas. The country should move towards this ideal scenario in the long run. Tests to diagnose diseases such as dengue should be available in lower level facilities. Difficult areas should be served with better trained personnel as they don’t have any other alternatives. Also, there is no transport even to visit other areas. Contrary to this, trained manpower are concentrated in urban areas. In some places or under some circumstances, doctors perform clerical jobs. This may be reduced if the manpower use is optimised MOH posted in these areas should have adequate training. Those doctors appointed fresh as MOH should be monitored for some
time before they are left alone to tackle the health issues in those areas. Mobile clinics can be organised for specialist services.

Oxygen needs to be supplied to all the peripheral centres. Certain type of drugs is disallowed for some facilities. This should be removed. Actually many cases are transferred to higher level facilities because there is no facility at the lower level facilities. There is a cost involved for this and it can be eliminated if the peripheral facilities are strengthened. In general, treatment should be patient or client centric.

Preventive care

Health education with an emphasis on preventive and promotive care should be provided to the people. Government can institute an award scheme to promote health and best public health practices can be awarded. Well care facilities need to be provided in government institutions and the related basic routine blood and other tests must be carried out. Midwives and PHIs should be trained to provide information about the emerging diseases such as cancer, hypertension, diabetes and cardiovascular diseases.

Men should be included in the public health provision. Preventive care needs to be redefined so that MOH institutions are more relevant to the present-day context. Issues such as alcoholism are multi-factorial and so, need to be tackled with cooperation from other departments. Alcohol de-addiction drugs and counselling should be provided at the MOH institutions. School route can be tried
to prevent alcoholism. Religious leaders such as Buddhist monks can be used as well. Heroin addiction should be dealt along with alcoholism.

It is better if government distributes waste bags to the people so that they can use it for disposing their waste. Government could also think about installing a waste recycling machine. People can make paper and paper toys using the waste. This is at present done by the NGOs in some places. Counselling and health education facilities should be made available once again. PHIs may be empowered to take action concerning the environmental issues.

Medical Officer (health) should be empowered to give sanctions for building construction. No building should be allowed without MO(H) approval. PHIs may be empowered to visit the new constructions and take appropriate action is they fail to adhere to rules. There used to be a law making it mandatory for local authorities to share information relevant to health with the health authorities. At present, no such law exists.

Child health

The choice to participate in the physical training activity in schools is entirely left to the children in some schools. This should be made mandatory for every student. There should be routine health check up for children. Introduction of mid-day meal scheme or even provision of biscuits and milk to the students around 10-10.30 a.m. would be ideal. The eligibility radius of 2 km for student admission is rendered ineffective as students come from far away places. This is
one of the reasons why they come to school without breakfast. Health issues of children born to mothers who are in abroad should be addressed through school health programme. Government should think about providing nutritional supplements to school children. Such an intervention by the school management worked in some places to improve the body weight of the school children. This should be implemented at the national level.

Public sector efficiency

People are not aware of facilities existing in the government facilities. Effort must be taken to inform the public about the facilities existing in various levels of government institutions. Improve monitoring and supervision; hospital development committees may be empowered to intervene appropriately and involve media, patients and public to highlight the issues and problems. Staff attitude needs to be changed. Some of the facilities are inadequate and it is necessary to extend the facilities that are limited to higher level institutions to lower level institutions too. Drug supply is inadequate and therefore, has to be enhanced. More drugs are required to be provided to government health care facilities in villages. There must be a complaint box kept in each government facility. Medical students must be taught about dealing with the public so that they can practice them when they work as physicians.

Government health care delivery institutions should carry out a needs assessment so that they can provide appropriate care. Villages need qualified doctors not the RMOs. M.B.B.S. doctors are available only after 4.30 p.m. that
too on payment. Consultants may visit smaller institutions at least twice a month so that people can consult them without spending on transport. Emergency preparedness is inadequate even in district hospitals. For instance, the staff panics if more than one accident/suicide victim come to the institution for care at a time.

The staff strength has increased without adding services to them as the increased staff strength caters to clerical and administrative requirements. In fact, services are coming down when the staff strength is increasing. Administration also dominates in the functioning. They also misuse the facilities for their own or family benefits

Financing

Resource allocation is not demand driven and is dominated by the ceiling. There is also no periodic facility assessment for addition/update of facilities. Alcohol related diseases takes away significant proportion of resources from the Ministry’s health budget. Administration is taking increasingly higher share of health care resources at the cost of patient care. Health fund using 2% of sales proceeds can be created. But, this may result in government openly promoting alcoholism because it enhances revenue for the government. All the damages (for accident victims, injuries, etc.) can be claimed from the alcoholics. But, if the alcoholic is poor, this may not work.
Training of manpower

Internship for doctors should be extended to include more topics and departments. There should be frequent update of facilities and knowledge. Geriatric care is one area we need to learn/update. Pharmacy course needs to be extended by another year to include more theory sessions. Government should make efforts to update the knowledge of pharmacists about new drugs. At least it could think about publishing a book on new drugs. Government may consider creating certain facilities in private pharmacies for the overall welfare of the patients in this country. Similarly, government can think of reduced electric charges for the pharmacists when they use air conditioners to store drugs effectively. Soft loans may be extended to the pharmacies wanting to expand or improve quality of storage because some private pharmacists don’t have enough resources.

There are several imbalances in the medical curriculum that need to be corrected. Too many irrelevant subjects such as biochemistry and forensic science are taught at the cost of some relevant ones such as anatomy, anaesthesia, and psychiatry. In fact, irrelevant subjects do not contribute anything as failure rate is also high among these subjects. Better to invite a clinician to talk about the clinical aspects of the course before we are exposed to them. At present, there is no close coordination between the teaching faculty and the clinicians involved in the teaching of clinical aspects. We need more books and more copies and varieties of books on some topics. The University needs to subscribe to more
journals than what is available now. Whichever journal is available should be made available continuously.

Pathology and forensic museum operating inside the campus operate only during the office hours and it is difficult for us to visit it as we are pre-occupied with our classes and exams during the office hours. There is no shell lab here. Only Colombo University students have the benefits of shell lab.

Staff issues

Promotion avenues for lab technicians, midwives, nurses, pharmacists and PHI are limited. The rental and travel allowances of PHM and PHI are inadequate to cover the expenses. Bicycles of the PHMs and the motor bikes of the PHIs should be replaced every 5 years. Some of them are 20 years old.

5.5 Working group results

The purpose of the working groups was to identify health and health care issues and provide the background material for the NCMH report on specific topics. Two topics – financing and budgeting - were identified for this purpose and working groups were formed by NCMH on these two topics. The working groups had various sittings before submitting their reports to the Commission. The summary findings of the reports are given here.
5.5.1 Financing

The group decided to have a specific focus for deliberations in its sittings and considered various topics under the head ‘financing’ for this purpose (NCMH 2004b). The topics identified for initial consideration were social health insurance, hospital based revenue generation, community financing, earmarked taxes, and out of pocket expenditure. The group, after a detailed discussion, decided to focus on ‘out of pocket expenditure’ keeping an eye on the welfare of the poor. Further emphasis was given on the non-communicable diseases, given the fact that they are serious problems even in rural areas of Sri Lanka and that not much is known about these diseases especially in rural areas. Among the non-communicable diseases, diabetes, heart ailments and asthma were chosen for detailed analysis. The major thrust of the group was on state interventions and international cooperation to improve health outcomes through them to enhance economic development.

A separate survey among 240 patients was conducted by the group to understand the cost of non-communicable disease care and its financing. The findings indicated consultancy fee, under-the-table payment, cost of drugs, travel cost and cost of accompanying persons formed the components of the treatment cost for the patient. Each day’s consultancy fee is equivalent to about 2 days’ wage of a casual labourer. Under-the-table payment forms a significant portion of their treatment cost in public health care institutions. Drug cost is specifically high due to the tendency of the doctors to prescribe in brand names. Almost all the
patients seeking treatment from the public sector bought medicines from private pharmacies due to their non-availability in the public sector. Based on the findings and deliberations, the group proposed certain policy interventions; they are given in Box-7.

<table>
<thead>
<tr>
<th>Box-7. Proposed policy interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source:</strong> NCMH 2004b</td>
</tr>
</tbody>
</table>

- Community level screening (especially of those above 40 years of age), testing (especially in rural areas) and counselling (specifically targeting the lifestyles of youth).
- Reintroduction of family physician concept.
- A strategic integration of public and private care with a prepayment mechanism for private care.
- Creation of special funds to meet the special needs such as dialysis.
- Creation, linking and analysis of patient information on diagnosis to prepare the system for better disease management.
- Apportioning a part of all private facilities for free care to the poor.
- Use of patient waiting time to impart knowledge and information on non-communicable diseases.
- Late clinics in public sector institutions to accommodate more male patients.
5.5.2 Budgeting

The working group on budgeting focused mainly on the feasibility of applying step-down cost accounting to estimate unit cost of services provided by the public health care sector in Sri Lanka (NCMH 2004c). Using the results of a pilot study in a public hospital specifically conducted for this purpose, the working group suggested that the step-down cost accounting is an appropriate technique to estimate the unit cost of services provided by the public hospitals in Sri Lanka. The caveat, however, is that the suggestion or observation was based on a study in one hospital where the cost accounting is little more developed compared to other public hospitals in Sri Lanka. The break up of the hospital cost across various line items is given in Figure-29. As the figure indicates, cost of personnel

**Figure-32. Break up of total cost in a public hospital in Sri Lanka**

**Source:** NCMH 2004c
including the salaries accounts for 39.1% of the total cost while cost of finance takes away 18.9%. Drugs and supplies (including X-ray films, chemicals and laundry) receive 28.3% whereas the share of maintenance is a mere 0.3%.

5.6 Study results

The NCMH, under the supervision of the working groups, commissioned 6 studies. Only three of them were completed so far and their results are summarised here.

5.6.1 Evaluation of tax and fiscal incentives for health sector development

In order to promote private sector investment in health, the government of Sri Lanka provides fiscal incentives to private health care investors through the Board of Investment (BOI). Exemption from import duties, GST/VAT, and corporate income tax and provision of state land at less than market rate are the fiscal incentives enjoyed by the private investors under the scheme. Introduced in 1992, the scheme has undergone five revisions in 1994, 1995, 1998, 2002 and 2003. This study analysed the impact of the BOI incentives on health care in general and on the private health investment in particular (Kalyanaratne and Rannan-Eliya 2004). The emphasis was given to BOI hospital projects, as they are predominant and are the only ones in operation in sufficient numbers to permit a meaningful analysis.
BOI schemes for health sector projects

The provision of investment incentives to health sector projects by the BOI has been according to its general framework for special development projects. Being the central facilitator for investors, the Board of Investment is empowered to grant special concessions to investors, whose investments are identified as special development projects that are designed to satisfy the specific economic objectives of the government. The principal law applicable to foreign investments is the BOI Law No. 4 of 1978 and amendments introduced in 1980, 1983, and 1992. The main statutory provisions allow for these special concessions through Section 17 of the BOI law. Investors, who fulfill certain eligibility criteria, are liable to receive various concessions in terms of taxation, import duties, and access to land. The special concessions that are extended to private sector investors are in addition to other provisions made by the Inland Revenue Act. The qualifying criteria and concessionary norms during each of the six policy regime are given in Table-9.

BOI health projects

Since the inception of the incentive schemes for health care projects in 1992, 20 such projects have been approved by BOI, of which 4 are awaiting agreement with BOI, 7 are awaiting implementation or commercial operation, and 9 are in commercial operation. The cumulative number of BOI-supported hospitals in commercial operation has gradually increased since the inception of the scheme, and from 1998 the rate of increase has accelerated (Figure-33). Sixty two
Table 9. Qualifying criteria and concessions under each policy regime

Source: Kalyanaratne and Rannan-Eliya 2004

<table>
<thead>
<tr>
<th>Period</th>
<th>Qualifying criteria</th>
<th>Corporate tax exemption/holiday (yrs.)</th>
<th>Income tax concession &amp; no. of yrs.</th>
<th>Import duty exemption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Minimum)</td>
<td>Initial capital investment</td>
<td>No. of beds</td>
<td></td>
</tr>
<tr>
<td>1992-94</td>
<td>2.5 m</td>
<td>100</td>
<td>7&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2% on profit 15 yrs.</td>
</tr>
<tr>
<td>(US $)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994-95</td>
<td>2.5 m</td>
<td>100</td>
<td>NA</td>
<td>15% 7 yrs.</td>
</tr>
<tr>
<td>(US $)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995-98</td>
<td>500-1,499</td>
<td>NA</td>
<td>10&lt;sup&gt;b&lt;/sup&gt;</td>
<td>15% 15 yrs.</td>
</tr>
<tr>
<td>(Rs. Million)</td>
<td>1,500-2,499</td>
<td>NA</td>
<td>12&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2,500-4,999</td>
<td>NA</td>
<td>15&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>≥ 5,000</td>
<td>NA</td>
<td>20&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>1998-02</td>
<td>Colombo</td>
<td>NA</td>
<td>10&lt;sup&gt;a&lt;/sup&gt;</td>
<td>NA</td>
</tr>
<tr>
<td>(Rs. m)</td>
<td>75-499</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others 50-499</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002-03&lt;sup&gt;c&lt;/sup&gt;</td>
<td>US $ 500,000</td>
<td>NA</td>
<td>Region-1: 3&lt;sup&gt;a&lt;/sup&gt;</td>
<td>10% &amp; 2 yrs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Region-II: 5&lt;sup&gt;d&lt;/sup&gt;</td>
<td>20%</td>
</tr>
<tr>
<td>2003</td>
<td>US $ 500,000</td>
<td>NA</td>
<td>5&lt;sup&gt;a&lt;/sup&gt;</td>
<td>10% &amp; 2 yrs.</td>
</tr>
</tbody>
</table>

<sup>a</sup> Reckoned from the 1<sup>st</sup> profit-making year

<sup>b</sup> Reckoned from the date of commencement of commercial operation

<sup>c</sup> Region I are administrative districts in western province while region II are other districts

<sup>d</sup> From the first year of profit or 2 years from the date of commercial operation, whichever is early.
percent of the BOI hospitals, which are in commercial operation by 2003 and awaiting commercial operation, are in Colombo district while the rest are in Kalutara, Galle, Kandy, Kurunegala, and Anuradhapura districts (Figure-34).

The number of beds in BOI-supported hospitals has grown over time. A continuous increase can be seen in number of beds in operation in BOI-
Table-10. Fiscal costs of import duty concession 1994-2003

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital goods imports (Rs. million)</th>
<th>Value of import duties forgone (Rs. million)</th>
<th>Average rate of import duties forgone</th>
<th>Cumulative fiscal loss (Rs. million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>187</td>
<td>24</td>
<td>7.7</td>
<td>24</td>
</tr>
<tr>
<td>1995</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>1996</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>34</td>
</tr>
<tr>
<td>1997</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>1998</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>44</td>
</tr>
<tr>
<td>1999</td>
<td>125</td>
<td>6</td>
<td>20.2</td>
<td>56</td>
</tr>
<tr>
<td>2000</td>
<td>113</td>
<td>7</td>
<td>17.2</td>
<td>70</td>
</tr>
<tr>
<td>2001</td>
<td>493</td>
<td>79</td>
<td>6.3</td>
<td>161</td>
</tr>
<tr>
<td>2002</td>
<td>989</td>
<td>49</td>
<td>20.2</td>
<td>233</td>
</tr>
<tr>
<td>2003</td>
<td>192</td>
<td>6</td>
<td>29.7</td>
<td>262</td>
</tr>
</tbody>
</table>

Note: Import duties were calculated by item by item review or actual imports reported in individual hospitals. Average rate in a given year varies according to composition of imports and tariff rates.

Applicable Custom Tariff rate = import duty rate + (import duty rate × surcharge rate)

Fiscal cost = CIF value of capital imports × applicable import duty rate
supported hospitals since 1994, with the most rapid rate of increase (35%) observed during 1999–2000 (Figure-35). Share of Colombo in BOI beds was significantly higher than that of the non-Colombo areas and has been constantly increasing.

*Estimated fiscal cost of BOI incentives*

The estimated fiscal costs associated with import duty concession are given in Table-10, and Figure-36 presents the cumulative annual revenue losses. The estimated fiscal costs associated with the exemption from GST/VAT are given in Table-11, and Figure-37 presents the cumulative annual revenue losses. As can be seen, the net cumulative fiscal loss has increased from Rs. 25 million in 1999 to Rs. 245 million in 2003.

BOI has also leased out 9 blocks of land to private hospital investors since the inception of the scheme; 6 of them are in Colombo. They are located in highly urbanized areas, where the price of land is high. However, the actual fiscal loss would depend on the future course of interest rates and inflation in land prices. In this study, the fiscal loss was estimated based on three assumed annual inflation scenarios (6%, 10% and 12%). The estimated fiscal losses corresponding to all the three inflation scenarios are given in Figure-38. However, fiscal loss due to corporate income tax concessions are minimal as the existing projects have operated long enough to start making profits.
Table-11. Annual fiscal costs of GST/VAT concession 1998-2003

<table>
<thead>
<tr>
<th>Year</th>
<th>Goods imported (CIF value Rs. million)</th>
<th>Value of GST/VAT forgone (Rs. million)</th>
<th>Average rate of GST/VAT forgone</th>
<th>Cumulative fiscal loss (Rs. million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>161</td>
<td>25</td>
<td>6.4</td>
<td>25</td>
</tr>
<tr>
<td>2000</td>
<td>113</td>
<td>18</td>
<td>6.4</td>
<td>46</td>
</tr>
<tr>
<td>2001</td>
<td>493</td>
<td>72</td>
<td>6.8</td>
<td>127</td>
</tr>
<tr>
<td>2002</td>
<td>1,014</td>
<td>71</td>
<td>14.26</td>
<td>215</td>
</tr>
<tr>
<td>2003</td>
<td>200</td>
<td>9</td>
<td>23.4</td>
<td>245</td>
</tr>
</tbody>
</table>

**Note:** GST/VAT rates were calculated by item by item review or actual imports reported in individual hospitals. Average rate of GST/VAT in a given year depends on composition of imports.

Fiscal cost = \( \text{CIF value of capital imports} \times (100 + \text{duty rate} + (\text{duty rate} \times \text{surcharges})) \times \frac{\text{VAT/GST rate}}{100} \)

**Figure-37. Revenue loss due to GST/VAT concession 1998-2003**

**Figure-38. Fiscal losses due to land concessions 1992-2003**
Table-12. Aggregate fiscal costs of BOI incentives 1992-2003

<table>
<thead>
<tr>
<th>Year</th>
<th>Import duty exemption (Rs. million)</th>
<th>GST/VAT exemption (Rs. million)</th>
<th>Leasing-out of crown lands (Rs. million)</th>
<th>Total fiscal cost (Rs. million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>0</td>
<td>0</td>
<td>41</td>
<td>41 (0.41)*</td>
</tr>
<tr>
<td>1993</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1994</td>
<td>57</td>
<td>0</td>
<td>0</td>
<td>57 (0.57)</td>
</tr>
<tr>
<td>1995</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1996</td>
<td>0</td>
<td>0</td>
<td>35</td>
<td>35 (0.35)</td>
</tr>
<tr>
<td>1997</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1998</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1999</td>
<td>9</td>
<td>37</td>
<td>327</td>
<td>373 (3.73)</td>
</tr>
<tr>
<td>2000</td>
<td>9</td>
<td>24</td>
<td>63</td>
<td>96 (0.96)</td>
</tr>
<tr>
<td>2001</td>
<td>95</td>
<td>88</td>
<td>224</td>
<td>407 (4.07)</td>
</tr>
<tr>
<td>2002</td>
<td>54</td>
<td>78</td>
<td>52</td>
<td>184 (1.84)</td>
</tr>
<tr>
<td>2003</td>
<td>6</td>
<td>9</td>
<td>0</td>
<td>15 (0.01)</td>
</tr>
</tbody>
</table>

* Figures in parentheses are US $ in millions.

Note: Inflation rate assumed to be 10%.

Table-12 summarizes the estimated overall fiscal costs while Figure-39 presents the cumulative fiscal cost assuming that these revenue losses translated into additions to public debt. About two-third of the fiscal cost is attributable to land
concessions while the remainder is equally shared between the other two concessions.

Non-fiscal impact

The clear conclusion from the statistics is that the BOI schemes have failed to increase the volume of overall private hospital provision. From 1994 to 2003, private hospitals receiving BOI incentives increased their beds from 338 to 1,084, and inpatients treated from 19,537 to 111,138. However, the increase in BOI supported beds was an outcome of a shift in beds from the non-BOI private hospitals to BOI supported hospitals. The shift occurred through closure or reduction in size of non-BOI hospitals. Also, some non-BOI hospitals became BOI hospitals. Although the inpatient load of the private hospitals increased in absolute terms, the relative share of the private hospitals remained at 2.8%. In other words, the rate of increase in inpatient load is just the same as the rate in

**Figure-39. Cumulative fiscal cost of BOI incentives 1992-2003**

**Figure-40. Admissions in public, BOI & non-BOI hospitals 1994-03**

**Note:** Inflation rate assumed to be 10%.
public hospitals. Inpatient admissions in public, private BOI and private non-BOI hospitals are given in Figure-40. The price of hospital admissions too went up by 60% during the period 1994-2001.

5.6.2 Review of health resource allocation to provinces by the centre

This study was conducted to understand the health care resource flow between the centre and the provinces under the decentralised government (Maulana 2005). In the process, the study identified the strengths and weaknesses of the existing decentralised system. The study reviewed the literature on the topic and interviewed policy makers at the central and provincial levels. The process of resource allocation to health under the decentralised set up was also followed up. Two provinces (Western and North Central) were chosen for the detailed study.

The provinces in Sri Lanka, unlike in other countries such as India, were not formed on the basis of true federalism. The entire decentralisation looks like a de-congestion exercise of sharing the functions or responsibility rather than a genuine decentralisation of sharing power, finance and functions. While administrative responsibilities were decentralised, political and financial powers still rest with the Central government. Power or revenue sharing between the centre and the provinces was not envisaged by the 13th Amendment. There is absolute lack of policy making at the provincial level and provinces are reduced to just implementing agencies. This is contrary to the goal of decentralisation to improve quality of governance through decentralised decision making. Governments of all the provinces except that of the Western Province have very
narrow revenue bases and central government grants financed 82.2% of the provincial activities in these provinces. Even the allocation of central grants is a ‘gap filling’ exercise rather than a planned resource allocation mechanism.

The entire provincial health system is totally dependent on the central government for financing. Hospitals are not interested to mobilise local resources as they are not allowed to retain the resources thus mobilised. Some of the central government initiatives requiring the provincial support are not covered by adequate funding at that level thus putting the already over-relying provinces under financial stress. Even resources voted by the Parliament do not reach the provinces in time. Incomplete decentralisation has affected the service provision as there are multiple overlapping and ambiguous layers without helping to enhance the effectiveness and efficiency.

5.6.3 Occupational health and productivity loss

The objective of this study was to describe the occurrence of common diseases among the working population of the industrial and service sector in Sri Lanka and to estimate the resultant productivity losses (Ratnapriya and Ganeshamoorthy 2005). According to the Department of censes and statistics, worker population in Sri Lanka was 6,467,000 representing about one-third of Sri Lankan population. Employees of formal sector accounts for 58.3% while the rest consists of employers, self employed and unpaid family workers. This work force is divided unequally between agriculture, industry and service sectors comprising public, private, self-employed and unpaid family workers. In Sri Lanka, private
sector employs 45.1% of workforce while public sector employs 13.2%; self-employed accounts for 28.0% and unpaid family labour constitutes 10.8%

Study sample

This study focused on the formal employees of the industrial sector alone. More specifically, seven sub-sectors were covered; they are

- Textiles, wearing apparels and leather products
- Chemicals and petroleum
- Food and beverages
- Wood and wood products
- Paper and paper products
- Non metallic and mineral products
- Fabricated metal products

This study was conducted in Colombo district of Sri Lanka. A sample of 400 employees were chosen from these sub-sectors for the purpose of this study. The distribution of total and sample employees across the industrial sub-sectors in Colombo district are given in Table-13. The chosen employees were divided into 3 categories, viz., executive, non-executive, and minor employee. The required data were collected from the industrial records and using a questionnaire. The questionnaire sought information about employment status, health status, sick leave, family illnesses, and occupational risks.
Table-13. Distribution of sample employees across industrial sub-sectors

<table>
<thead>
<tr>
<th>Industrial sub-sector</th>
<th>Total no. of employees</th>
<th>Employees in sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food, beverages and tobacco</td>
<td>2,310 (6.5)*</td>
<td>35 (8.8)</td>
</tr>
<tr>
<td>Textile, wearing apparel &amp; leather products</td>
<td>16,606 (46.1)</td>
<td>155 (38.8)</td>
</tr>
<tr>
<td>Wood and wood products</td>
<td>3,766 (10.4)</td>
<td>40 (10.0)</td>
</tr>
<tr>
<td>Paper and paper products</td>
<td>2,978 (8.3)</td>
<td>35 (8.8)</td>
</tr>
<tr>
<td>Chemical, petroleum, rubber &amp; plastic products</td>
<td>4,830 (13.3)</td>
<td>80 (20.0)</td>
</tr>
<tr>
<td>Non-metallic mineral products</td>
<td>3,038 (8.4)</td>
<td>35 (8.8)</td>
</tr>
<tr>
<td>Basic metal products</td>
<td>656 (1.8)</td>
<td>-</td>
</tr>
<tr>
<td>Fabricated metal products, machinery &amp; equipment</td>
<td>1,338 (3.7)</td>
<td>20 (5.0)</td>
</tr>
<tr>
<td>Manufactured products not elsewhere specified</td>
<td>537 (1.5)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36,059</strong></td>
<td><strong>400 (100)</strong></td>
</tr>
</tbody>
</table>

* Figures on parentheses are percentages.

Employee profile

Over 90% of the sample employees belonged to the age group of 20-50 years with those aged 20-30 years were predominant (53.3%). About one-third of the chosen employees were women. An overwhelming majority (99%) of the employees had school education up to or below 12 years. About one-fourth had more than 10 years experience while 40% had the experience of less than 5
years. Most (99%) of the employees recruited for the study had non-executive (clerical) and minor (assistants) jobs.

Nearly half of the employees earned less than Rs. 7,500/- (US $ 75) per month while another 31.5% earned a monthly salary in the range of Rs. 7,500 -Rs. 10,000/- (US $ 75-100) per month; 4.8% earned more than Rs. 15,000/- (US $ 150). An interesting feature, bearing impact on employee health, is that 96% of the employees did overtime work to bolster their income.

Ailments

Common symptoms of ailments and specific diseases affecting the employees are given in Table-14. A vast majority of employees suffered from head ache, fever and skin problems. Employees were able to share the diagnostics of their ailments too. The most prevalent diseases among the employees are hemorrhoids, asthma, and ophthalmic problems. Notably, diseases that are common in the general population according to the annual health bulletin such as coronary heart diseases, hypertension, diabetes, and stress related problems have not figured as common diseases. This indicates that the industrial employees do not represent common population and their ailments could be partly occupational.
Table-14. Common ailments and diseases affecting the employees

<table>
<thead>
<tr>
<th>Symptomatic ailment</th>
<th>% affected</th>
<th>Disease</th>
<th>% affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>55.8</td>
<td>Hemorrhoids</td>
<td>20.0</td>
</tr>
<tr>
<td>Fever</td>
<td>46.8</td>
<td>Eye problems</td>
<td>15.0</td>
</tr>
<tr>
<td>Skin problems</td>
<td>30.8</td>
<td>Asthma</td>
<td>11.3</td>
</tr>
<tr>
<td>Cough</td>
<td>26.0</td>
<td>Migraine</td>
<td>6.8</td>
</tr>
<tr>
<td>Breathing problems</td>
<td>20.3</td>
<td>Kidney &amp; related problems</td>
<td>6.5</td>
</tr>
<tr>
<td>Chest pain</td>
<td>15.0</td>
<td>Diabetes &amp; hypertension</td>
<td>5.3</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>9.0</td>
<td>Gastritis</td>
<td>4.6</td>
</tr>
<tr>
<td>Injuries</td>
<td>8.3</td>
<td>Chronic lung conditions</td>
<td>3.8</td>
</tr>
<tr>
<td>Joint pain</td>
<td>7.8</td>
<td>Hearing problems</td>
<td>3.5</td>
</tr>
<tr>
<td>Others (arthritis, liver disorders, &amp; tuberculosis)</td>
<td></td>
<td></td>
<td>2.3</td>
</tr>
</tbody>
</table>

Absenteeism due to sickness

Out of 400 employees, 261 (65.3%) reported sickness during six months and 248 (62.0%) were required to seek medical attention (Table-15). About 10% of the employees reported more than 10 days of sickness while three of them had sickness for 30 days. Overall, sickness accounted for 41.8% of all absence (Table-16). Among the seven sub-sectors, chemical sector reported highest number of days of absenteeism due to sickness. The average number of
Table-15. Sickness days and absenteeism

<table>
<thead>
<tr>
<th>Days of reported sickness</th>
<th>No. of employees</th>
<th>No. sought medical attention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>139 (34.8)*</td>
<td>0 (0.0)*</td>
</tr>
<tr>
<td>1 - 5</td>
<td>147 (36.8)</td>
<td>139 (94.6)</td>
</tr>
<tr>
<td>6 - 10</td>
<td>74 (18.5)</td>
<td>71 (95.9)</td>
</tr>
<tr>
<td>11 - 20</td>
<td>23 (5.7)</td>
<td>21 (91.3)</td>
</tr>
<tr>
<td>21 - 30</td>
<td>14 (3.5)</td>
<td>14 (100.0)</td>
</tr>
<tr>
<td>&gt; 30</td>
<td>3 (0.7)</td>
<td>3 (100.0)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>400 (100)</strong></td>
<td><strong>248 (62.0)</strong></td>
</tr>
</tbody>
</table>

* Figures in parentheses are percentage of employees in each category and percentage of those sick seeking medical attention

sickness days was 7 in this sector and sickness accounted for 44.1% of all absence. However, proportion of sickness in the overall absenteeism was the highest (53.5%) in textile sector. Similarly, sickness accounted for 50% absence in wood industry. Absence due to sickness was lowest (1.4 days per employee) in fabricated metal industry while the proportion of absence due to sickness was the least (24.4%) in non-metallic and mineral sector.

Although one would expect the number of sickness days to increase as the age increases, no such pattern was observed among the sample employees. Absence due to sickness was fairly uniformly distributed across all age groups.
Table-16. Absenteeism due to sickness across sub-sectors

<table>
<thead>
<tr>
<th>Sub-sector</th>
<th>No. of employees</th>
<th>Absence (days)</th>
<th>Average (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>General</td>
<td>Sickness</td>
</tr>
<tr>
<td>Textiles</td>
<td>155</td>
<td>910</td>
<td>487 (53.5)*</td>
</tr>
<tr>
<td>Chemicals</td>
<td>80</td>
<td>1268</td>
<td>559 (44.1)</td>
</tr>
<tr>
<td>Food</td>
<td>35</td>
<td>562</td>
<td>181 (32.2)</td>
</tr>
<tr>
<td>Wood</td>
<td>40</td>
<td>448</td>
<td>224 (50.0)</td>
</tr>
<tr>
<td>Paper</td>
<td>35</td>
<td>427</td>
<td>177 (41.5)</td>
</tr>
<tr>
<td>Non Metallic</td>
<td>35</td>
<td>634</td>
<td>155 (24.4)</td>
</tr>
<tr>
<td>Metal fabricate</td>
<td>20</td>
<td>80</td>
<td>28 (35.0)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>400</strong></td>
<td><strong>4329</strong></td>
<td><strong>1811 (41.8)</strong></td>
</tr>
</tbody>
</table>

* Figures in parentheses are percentage of absence due to sickness

This indicates that sick leave may not be the sole indicator for absence due to sickness. Number of sick leave was high among those who did overtime work. This is along the expected lines although one cannot rule out the possibility that overtime could have been used as an excuse for availing sickness leave. Across the income groups, absenteeism due to sickness was high among low income employees compared to high-income employees. This also could be due to the fact the lower income employees alone are eligible to claim overtime work and pay. The study also monetized the loss due to sickness and the results are given in Table-17. Total direct monetary loss to the industries employing the sample
employees on account of sickness can be estimated as Rs. 1.585 million (or US $ 15,847) per annum. It may be recalled that only 1.1% of the district’s industrial employees were included in the study (Table-12). If we extrapolate the loss to include all the employees, then the extrapolated annual loss on account of employee sickness for the district can be estimated as Rs. 144.09 million (US $ 1.44 million). The loss due to sickness would amount to about 3.8% of the salary bill of the industries. However, this does not include the employee sickness benefits and medical bills to be borne by the industrial units.

Table-17. Direct monetary loss to the industry due to sickness

<table>
<thead>
<tr>
<th>Salary range (Rs.)</th>
<th>Average salary per person day (Rs.)</th>
<th>Annual sickness absence (person days)</th>
<th>Annualized sickness loss (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3,000</td>
<td>60*</td>
<td>45</td>
<td>2,700</td>
</tr>
<tr>
<td>3,000 – 7,500</td>
<td>210</td>
<td>1,832</td>
<td>384,720</td>
</tr>
<tr>
<td>7,500 – 10,000</td>
<td>350</td>
<td>1,678</td>
<td>587,300</td>
</tr>
<tr>
<td>10,000 – 15,000</td>
<td>500</td>
<td>523</td>
<td>261,500</td>
</tr>
<tr>
<td>15,000 – 20,000</td>
<td>700</td>
<td>495</td>
<td>348,500</td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>4,573</td>
<td>1,584,720</td>
</tr>
</tbody>
</table>

* Estimated taking the mid value in the salary range and keeping number of working days as 25
HEALTH CHALLENGES BEFORE THE NATION

Despite long list of successes in health, Sri Lanka is faced with ever extending health agenda demanding increasingly more resources. It is time for the government(s) of Sri Lanka to re-organise, regulate and find more resources (government, non-government or donor) for the health sector. This chapter lists out the major challenges faced by the health sector in Sri Lanka. Although various issues are brought up, the list provided here is not exhaustive.

5.7 Attaining Millennium Development Goals

United Nations General Assembly placed health as the heart of development while articulating the Millennium Development Goals (MDGs) (WHO 2003, World Bank 2004). As the world approaches the fifth anniversary of the Millennium Declaration, Sri Lanka has already achieved three of the eight goals (education, gender equality and environment), completely whereas it has accomplished one goal (child mortality) partially (Table-18). Hence, five out of eight goals (including the partially achieved one) are to be met before 2015. Poverty is still a major issue with every fourth Sri Lankan living below the poverty line (less than a dollar a day). Reduction in IMR, under-5 mortality and MMR is possible while child malnutrition and low birth weight are still prevalent. Among the major disease, malaria has significant presence in Sri Lanka.
Table-18. Sri Lankan status vis-à-vis Millennium Development Goals

*Source*: World Bank 2004, 2003a

<table>
<thead>
<tr>
<th>MDG</th>
<th>Target for 2015</th>
<th>Sri Lankan status</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eradicate extreme poverty and hunger</td>
<td>Halve the proportion of people whose income is &lt; $1/day</td>
<td>Poverty incidence 25%</td>
<td>Larger regional disparities in poverty exist</td>
</tr>
<tr>
<td>Achieve universal primary education</td>
<td>Enrol all children in primary school</td>
<td>Primary enrolment ratio is &gt; 97%</td>
<td>Quality, relevance and contribution to social inclusion in question</td>
</tr>
<tr>
<td>Promote gender equality and promote women</td>
<td>Eliminate gender disparity in all levels of education</td>
<td>Gender equality achieved</td>
<td>Gender disparities exist in access to employment</td>
</tr>
<tr>
<td>Reduce child mortality</td>
<td>Reduce the under-5 mortality rate by two-thirds</td>
<td>Under-5 mortality is 20</td>
<td>25% low birth weight infants and 33% child mal-nutrition</td>
</tr>
<tr>
<td>Improve maternal health</td>
<td>Reduce the maternal mortality rate by three-quarters</td>
<td>MMR is 92 per 100,000 live births</td>
<td>High prevalence of anemia among pregnant women</td>
</tr>
<tr>
<td>Combat HIV/AIDS, malaria, and other diseases</td>
<td>Reverse the spread of HIV/AIDS and incidence of malaria and other diseases</td>
<td>Malaria has significant presence</td>
<td>Half of the cases come from North-east.</td>
</tr>
<tr>
<td>Ensure environmental sustainability</td>
<td>Implement national strategy for sustainable development and reverse the loss of environmental resources</td>
<td>Two national plans are under implementation</td>
<td>Implementation is slow due to institutional weaknesses and unclear targets</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Develop a global partnership for development</td>
<td>Develop an open, rule-based, predictable, nondiscriminatory trading and financial system</td>
<td>Presently not well-developed</td>
<td>Needs attention</td>
</tr>
</tbody>
</table>

### 5.8 Taking Sri Lanka towards global best

Despite the phenomenal successes, it is appropriate to place Sri Lanka in the global context in order to know where it stands in terms of health achievements. This will help the country to fix its future priorities so that it can move ahead rather than sinking itself in complacency. Table-19 suggests that Sri Lanka has some distance to travel before it catches with the best in the word. For instance, Sri Lanka’s life expectancy, though high, still falls below the best achieved in the
world by 12.2%. Similarly, over 80% improvement is possible in reducing IMR, under-5 mortality, MMR, and TB and malaria deaths.


Source: Central Bank of Sri Lanka 2004, WHO 2004a

<table>
<thead>
<tr>
<th>Health indicator</th>
<th>Sri Lanka</th>
<th>Global Best</th>
<th>Scope for improvement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth (years)</td>
<td>73.0</td>
<td>81.9</td>
<td>12.2</td>
</tr>
<tr>
<td>Life loss due to ill-health (%) Female</td>
<td>13.9</td>
<td>8.8</td>
<td>36.7</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>11.8</td>
<td>7.8</td>
</tr>
<tr>
<td>Under-5 mortality (per ’000 live births)</td>
<td>20</td>
<td>3</td>
<td>85.0</td>
</tr>
<tr>
<td>IMR (per ’000 live births)</td>
<td>16</td>
<td>3</td>
<td>81.3</td>
</tr>
<tr>
<td>MMR (per ’00,000 live births)</td>
<td>92</td>
<td>0</td>
<td>100.0</td>
</tr>
<tr>
<td>Malaria deaths (per ’00,000)</td>
<td>6</td>
<td>0</td>
<td>100.0</td>
</tr>
<tr>
<td>Tuberculosis deaths (per ’00,000)</td>
<td>9</td>
<td>0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

5.9 Triple burden of poverty, lifestyle diseases and old age

While Sri Lanka stayed ahead of other developing countries in health status during the second half of the previous century, it’s status of poverty is no different from other developing countries. Success in the field of health and consequent
sudden surge in population might have resulted in higher unemployment and poverty. As a result, certain communicable diseases, under-nutrition and complications of child birth are still surviving and remain as part of unfinished health agenda. At the same time, the country is also exposed to the lifestyle diseases of high income populations. Diseases such as diabetes, liver diseases, hypertension and heart ailments show a marked increase in prevalence. In addition, the country has relatively higher proportion of old age people and it is likely to go further up in the years to come. In other words, lifestyle diseases co-exist with diseases of poverty and old age. Hence, the major challenge before Sri Lanka is to cope with poverty, lifestyle and ageing population.

5.9.1 Poverty

As discussed in Chapter-3, the country is faced with the fundamental challenge of raising the poorest (25% of population) out of poverty. Level of poverty is high among a significant section of the rural population. The incidence of poverty is particularly high among Sri Lankan Tamils and those employed in agricultural sector. Among the provinces, proportion of population living below the poverty line is unacceptably high in Uva province and Badulla tops the list of districts with highest level of poverty. In all these cases, the difference between the best and the worst ranges between 16.9% (ethnic groups) and 530% (districts). Due to extreme poverty, people are left without or with unhygienic toilets. Waste management is also poor among this population. This section of people live in
houses lacking enough ventilation and therefore, are vulnerable to certain diseases such as TB.

Similarly, employment status, income and consumption inequality vary across districts to the extent of 76.7%, 41.9% and 23.4% respectively. Unemployment is identified as one of the major causes of poverty. Unemployed youth are addicted to heroin and alcohol addiction as they don’t have anything else to do.

5.9.2 Lifestyle diseases

Sri Lanka has gone through both demographic and epidemiological transition in the 20th century amidst slower growth of economy. Although rewarding, the success has brought with a few challenges for the country. List of diseases added to disease burden gets extended fast and easily outnumbers the list of diseases discarded as a result of elimination/eradication. As a result, diseases of poverty coexist with lifestyle disorders. Hence, both the size and range of the disease burden are getting larger by every passing year. Nevertheless, projections of future epidemiological trends are not available.

Figures 41 and 42 illustrate the country’s epidemiological transition between 1975, 1980 and 2002. While deaths due to nutritional deficiency, anaemia, intestinal diseases and tuberculosis have come down, deaths attributable to heart and liver diseases are on the rise. As it can be recalled from Table-4, the top-5 causes of death are dominated by the non-communicable diseases. The fact that they are uniformly affecting all the areas of the country and their
Figure-41. Epidemiological transition (1975 & 2002)

Source: Government of Sri Lanka 2004a

Figure-42. Leading killers by diseases groups

Source: Government of Sri Lanka 2004a
prevalence is still increasing are reasons enough to feel alarmed. Ischemic heart disease and hypertension are among the top-5 leading causes of death in all districts and among the first three in 20 districts (Gunatilleke et al 1998).

Homicide/violence has emerged as a leading killer accounting for more than 10% deaths. Alcohol and heroin use is very high among unemployed youth and children of the parents (especially the mother) settled abroad. Alcohol induced domestic violence alone accounts for about 30% of hospital admissions and 3-5% of outpatients. It equally affects men and women. On the other hand, as it may be recalled from Table-5, injuries top the hospitalisation list even while hypertension figures as one of the causes of hospitalisation. The projected prevalence (Figure-43) of the diseases diabetes, hypertension, heart and liver

Figur-43. Disease trend during 1970-2015

Diabetes, hypertension, heart & liver diseases

Intestinal infection and malaria
diseases suggest that the non-communicable disease burden is going to bother the nation much in the next 10 years. Even small villages report 5-10 cancer cases and innumerable diabetes, hypertensive and cardiovascular cases.\(^{56}\)

About 5,000 persons commit suicide every year in Sri Lanka. Major reasons for suicides are identified as alcoholism and drug addiction, poverty, love failure, unemployment, sickness, failure in exams, and unwanted pregnancies. About 80% of alcohol addicts seeking help from de-addiction centres attempted suicides at some point of time in their life. Farmers, when poverty strikes them due to losses, end their lives too. Depression and schizophrenia account for 30-40% of suicides in the country.

Child nutrition is a major problem (NCMH 2004a). School children go to school without breakfast and their lunch box does not contain nutritious food. Some children (especially the grown up) don’t even drink enough water. All these greatly affect their health and about 1% of the school children faint in the school every day. Lack of adequate physical exercise is another problem affecting the school going children. Physical training in the school is very limited and even if it happens, is ineffective as students don’t even go out of the class during physical training classes. Children of mothers employed abroad receive little or no social and health care. Sexual abuse, teenage pregnancy, drug and alcohol use are the health outcomes of this. Teenage pregnancy accounts for about 5.4% of all pregnancies in some populations.
5.9.3 Ageing

Although ageing is a common problem for any country attaining health progress, Sri Lanka has a peculiar problem. The life expectancy is likely to reach the level of US by 2020 and the number of elderly is likely to increase rapidly after 2010 (Government of Sri Lanka 2003). It’s dependency ratio is likely to go up from 47% in 2002 to 72.5% in 2041 as the present adult population will become aged then (Central Bank of Sri Lanka 2004a, WHO 2004a). Sri Lanka will be the only developing country with a relatively higher share of old age population. While countries with higher per capita income such as Japan are economically better equipped to deal with ageing, Sri Lanka will be challenged to find resources to take care of the older population. Not only is the old age population economically less productive but also they would demand relatively higher share of health care resources as they grow older. At present, diseases of elderly people are not adequately addressed (NCMH 2004a). They are not even aware of the places providing geriatric care and so shop around to seek appropriate care.

5.9.4 Tsunami survivors

Preliminary estimate of the total cost of the destruction caused by Tsunami in Sri Lanka, as estimated by the Central Bank, is about Rs. 127.4 billion or US $ 1.3 billion (Daily News 2005). Keeping the Tsunami survivors healthy will be an enormous challenge to the health care system. With the prospect of people living in camps for extended periods, doctors have to worry about pregnant women, infants and children who need vaccinations. Preventing outbreaks takes vigilance
and sticking to specific routines like disinfecting drinking wells with chlorine and nagging people to wash their hands. Some doctors say the bereaved need counseling or therapy, but others say people will cope with sadness in their own way.
ECONOMIC CHALLENGES IN HEALTH

The structure and performance of the health system determine the health status of the population. In other words, health system’s success vis-à-vis the provision of optimal quality in an equitable and efficient manner determines the success vis-à-vis health status. Hence, the scope for improvement in health status lies in the gap in health system achievements in comparison to the rest of the world. As it is well known, Sri Lanka’s phenomenal success in the field of health lies in its success in health system. Although Sri Lanka scores well compared to other developing counties in terms of health system achievements, it falls short of the global best in terms of health expenditure, government share in health expenditure, and health’s share in government expenditure (Table-20). Share of out-of-pocket expenditure in health expenditure is unacceptably high while the share of pre-paid resources is unacceptably low. Even proportion of births attended by skilled manpower and TB cure rate are a bit lower than the level achieved by some countries.

5.10 Resource allocation

The main challenge before Sri Lanka’s health system is to increase its resources sufficiently to keep pace with the epidemiological transition, population growth and ageing, and progress in medicine and technology. Changing epidemiological trends and population ageing would require expensive but less effective care. Government needs to find resources to introduce such care in public facilities. Conflict caused a severe damage to the health system – damaged infrastructure
Table-20. Health system status (2001)

Source: World Bank 2004a

<table>
<thead>
<tr>
<th>Health system indicator</th>
<th>Sri Lanka</th>
<th>Global Best</th>
<th>Scope for improvement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total health expenditure (% GDP)</td>
<td>3.6</td>
<td>13.9</td>
<td>286.1</td>
</tr>
<tr>
<td>Govt. share in health expenditure (%)</td>
<td>48.9</td>
<td>98.8</td>
<td>102.1</td>
</tr>
<tr>
<td>Health’s share in govt. expenditure (%)</td>
<td>6.1</td>
<td>32.3</td>
<td>429.5</td>
</tr>
<tr>
<td>Share of external resources in health expenditure (%)</td>
<td>3.1</td>
<td>62.9</td>
<td>Can’t say</td>
</tr>
<tr>
<td>Share of out-of-pocket in health expenditure (%)</td>
<td>49.1</td>
<td>5.8</td>
<td>88.2</td>
</tr>
<tr>
<td>Share of pre-paid in health expenditure (%)</td>
<td>0.6</td>
<td>42.3</td>
<td>695.0</td>
</tr>
<tr>
<td>Births attended by skilled personnel (%)</td>
<td>94.1</td>
<td>100</td>
<td>6.3</td>
</tr>
<tr>
<td>TB cure rate (%)</td>
<td>77.0</td>
<td>100</td>
<td>29.9</td>
</tr>
</tbody>
</table>

(primary to tertiary level), breakdown of preventive and promotive services, lack of other support facilities (supplies, equipment etc.) and disorganization of education, sanitation, etc. Mass displacement also resulted in other physical and psychological problems. Recent Tsunami disaster too played its role in destabilising the country’s health system and necessitated additional health system measures. Health infrastructure damage due to Tsunami, affecting about 5% of the country’s population, is equivalent to about one-fifth of the country’s annual health budget.
Although challenges in the fields of both preventive and curative care on the rise, government resources for health care in general and resources for preventive
care are declining during the recent years (Figure-44). Share of preventive care and public health in the government budget has declined from about 11% in 1990 to 4% (Figure-45) in 2004 (Government of Sri Lanka 2005c). On the other hand, hospital services accounted for 73% in 2004. The decline in health care resources percolated down to the districts as shown (Figure-46) for Matale district during 1994-2002 (Deputy Provincial Directorate 2004).

**Figure-46. Budget slowdown**

**Projected Vs actual expenditure in Matale district**

*Source:* Deputy Provincial Directorate 2004

Absorbing the burden of unpredictable large health expenditure through a prepaid financing mechanism such as health insurance can reduce impoverishment through which undesirable health outcomes. There is no link between national policy and financial resource allocation. There is a need to establish a resource allocation mechanism that takes care of inequity and local health care needs of the population. As it has been seen, there is a heavy reliance on tax and out-of-
pocket resources to finance health care. However, government share has been declining in the last few years from 1.5% of GDP in 1990 to 1.1% at present (Government of Sri Lanka 1997). The level of external support is not high either. State expenditure is increasingly centralized and provincial share of government health expenditure declined in the 1990s. Central resource allocation to provinces is not based on objective and transparent measures of population needs. Only 6% of resources are allocated through 'criteria-based grants'. Matching grants to encourage local revenue raising still remain on paper.

5.11 Structural issues

Despite a phenomenal increase in staff strength in government health care institutions, it is estimated that there exists a shortage of 3,000 nurses (Government of Sri Lanka 2003c). At least 467 nurses are required even to restore the nurse-doctor ratio of 1978; nurse-doctor ratio declined from 1.78 in 1978 to 1.73 in 2003. Nurse-doctor ratio in Kerala state of India, which is often equated with Sri Lanka for its health indicators at low cost, is found to be 2.35 (Varatharajan et al 2002). There exists considerable staff vacancies across districts and staff vacancy in three districts are given in Table-21. The staff vacancy is to the extent of 16.3% to 52.3% of the requirement or sanctioned positions. There exist a shortage of pharmacists, lab technicians, radiographers, physiotherapists and ECG technicians. There are also other shortcomings such as absence of specialists, ambulance, equipments, drugs and supplies in some of the government facilities (Government of Sri Lanka 2003a). Lack of hygienic
conditions and cleanliness in government facilities too is reported to have resulted in some deaths.

Table-21. Staff vacancy in districts

Source: Deputy provincial directorate 2004a, 2004b, 2004c

<table>
<thead>
<tr>
<th>Category of staff</th>
<th>Availability (per 10,000)</th>
<th>Vacancy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ampara</td>
<td>Kaluthara</td>
</tr>
<tr>
<td>Specialist</td>
<td>0.27</td>
<td>0.01</td>
</tr>
<tr>
<td>Physician</td>
<td>2.85</td>
<td>0.53</td>
</tr>
<tr>
<td>Dentist</td>
<td>0.44</td>
<td>0.02</td>
</tr>
<tr>
<td>Nurse</td>
<td>6.43</td>
<td>0.38</td>
</tr>
<tr>
<td>Technician</td>
<td>0.51</td>
<td>0.10</td>
</tr>
<tr>
<td>Others</td>
<td>7.36</td>
<td>5.19</td>
</tr>
<tr>
<td>Total</td>
<td>21.35</td>
<td>6.23</td>
</tr>
</tbody>
</table>

There exists a considerable shortage of qualified health care manpower. The problem is severe in remote and conflict-affected areas. At the same time, doctors are over-produced. Government has a commitment to absorb all the medical graduates up to 2010. The existing manpower has insufficient quality and competence. The quality of training offered by both the MoH and universities is poor. Imbalance in production of manpower (ever increasing production of doctors and decreasing production of nurses and paramedics), geographic
inequity in distributing it, and mismatch between skill and requirement. These imbalances render the service delivery (both public and private) inefficient and ineffective even while the excess supply of doctors pose cost, quality and induced demand threats. The system of recruitment of staff and management needs to be geared to appraise the performance of individuals and institutions against their roles.

Government needs to find a way to regulate the private sector and obtain data from it without stifling initiative and innovation. Standards and norms are also set at the central level with little flexibility and authority at the peripheral level in financing, staffing, utilization of resources and to deal with emergencies. Excess centralization, lack of efficient management information system and lack of result-based performance appraisal system. There is a lack of comprehensive human resource strategy and lack of coordination among all units of MoH and MoTE. Rationalization of logistics and administration is required to put the existing resources to their best use.

5.12 Operational efficiency

While inefficiencies are often criticised, there has been little or no effort to analyse their size, causes, and approaches for their reduction (Berman and Sakai 1993). Public sector health care delivery staff are often required to operate in the least economically advantageous conditions serving poor and remote populations. In Sri Lanka, there are many areas of operational deficiencies that are to be attended. For instance, there exists a large variation across districts in
Figure-47. Outpatient attended by government institutions (2001)

Source: WHO 2003a
Figure-48. Inpatients attended by government institutions (2001)

Source: WHO 2003a
addressing the community outpatient and inpatient needs. Government institutions serve about 2 outpatients per capita in Puttalam district where the figure is about 4 in Ampara (Figure-47). Similarly, inpatient attendance varies between 7.1 per 1,000 population in Kilonochchi district and 307.2 per 1,000 population in Colombo district (Figure-48). Overall outpatient rates in the country has been declining whereas the rate of inpatient admissions has been increasing over the years (Figure-49). This indicates that the proportion of severe cases in the community is on the rise over the years.

Figure-49. Trend in out-patient and in-patient rates

Source: Government of Sri Lanka 2004a

Efficiency of government health care institutions vary across various levels of government institutions. For instance, majority of deliveries occur at the hospitals above the level of district hospitals (Figure-50). Peripheral units, rural hospitals and maternity homes jointly account for only 6% of all deliveries in Sri Lanka. However, lower level facilities perform better when it comes to out-patient care
(Figure-51). Figure-52 shows that there is no relationship between the rate of outpatients in the community and the death rate. It means that inpatient facilities play a crucial role rather than outpatient facilities in reducing the death rates in the community.

**Figure-50. Deliveries attended by various government health care institutions (2002)**

*Source: Government of Sri Lanka 2004a*
Figure-51. Outpatients served by government health care institutions (2002)

Source: Government of Sri Lanka 2004a

Figure-52. Outpatient attendance in government facilities and crude death rate across districts (2002)

Source: Government of Sri Lanka 2004a
5.12.1.1 Referral system - Bypassing the nearest facilities

About 17% of the population falls ill in any given month (Government of Sri Lanka 2003c). Allowing for 10% self-healing, 15.3% of the population would probably require formal treatment. Out of this, only 45% seek formal treatment and the rest postpone the treatment or resort to self-care and rituals. Among those seeking treatment, 50% are found to utilize the nearest government facility whereas others bypass it to seek care from higher level government facilities or from private sector (including the government doctors practicing privately). Utilization of nearest government facility is still low (nearly 0% in urban areas) for second and third consultations. Non-availability of appropriate facilities (in estate areas) and crowding (in urban areas) are the most cited reasons for bypassing. People in estate areas are more likely to utilize the nearest government facility because the cost of bypassing the nearest facility is the highest for this group.

Utilization of public facilities increased when the number of visits per episode increased. This is more so in the case of outpatient visits. Proportion visiting public facilities doubled between first and fifth visits.

5.12.1.2 Lack of coordination

Policies and plans pertaining to preventive and promotive activities with respect to various sub-divisions even within a division are not coordinated. The coordination is actually left to the insights, motivation and management skills of the medical officers. Ineffective and inaccessible health care services raise the
effective price of health care resulting in high mortality and lower health status (World Bank 2004a). Health care institutions lacking basic skills and facilities could also prove to be dangerous, as they cause higher mortality. Although Sri Lanka has a wide network of public health care institutions, their functioning has serious drawbacks. The quality of public health services in rural areas, where 80% of Sri Lankan live, is inferior to that in urban areas (Sanderatne 2000). As a result, there is a high level of self care and utilization of private pharmacies. Moreover, there is a big variation in the utilisation of various levels of government facilities. While higher level facilities are overcrowded, lower level facilities are grossly under-utilised. Heavy demand for inpatient facilities born out of insufficient diagnostic capabilities at the lower level facilities and bypassing of lower level facilities due to lack of referral mechanism.

There is a growing client dissatisfaction with the services rendered by the most public health care institutions. Overcrowding in larger hospitals, longer waiting time, unclean surrounding, and unhelpful staff are some of the reasons for their dissatisfaction. Issues of professional negligence are also on the rise.

5.12.2 Accessibility and utilisation

Contraceptive prevalence among ever-married women is reasonably high (70.8%) in Sri Lanka (Department of Census and Statistics 2002). The dominant method is female sterilisation (30%) followed by injection (15.5%) and oral pills (9.6%); sterilisation is high (43.1%) among estate women. While government is the dominant provider of contraceptive methods, private sector has significant
presence in the provision of condoms (49.2%), oral pills (20.1%) and vaginal methods (19.0%).

Proportion of houses visited by government health workers is 42.3% in estate areas compared to about 85% in other areas (Department of Census and Statistics 2002). The proportion of visits is also low among the illiterate (56.5%) and semi-literate (74.4%) population. Although proportion of mothers who have undergone ante-natal check-up is high (97.2%), blood tests are missing in 18.7% of women who have undergone ante-natal check-up. The proportion is also relatively high among illiterates and semi-literates.

Although over 93% deliveries occur in institutions, estate population reports higher proportion (18.3%) of home and other deliveries (Table-22) (Department of Census and Statistics 2002). Similarly, proportion of deliveries attended by doctors is relatively low in rural (37.6%) and estate (44.1%) areas and among illiterate (33.0%) and semi-literate (33.8%) populations compared to others (50-60%). Proportion of low birth weight children is 20.8% in estate areas compared to 11.6% in urban areas. Percentage of fully immunised children, although high at 81.0%, varies between 71.4% in estate and 82.2% in urban areas; it is also low (75.9%) among illiterates. Mean duration of breast-feeding varies between 21.6 months in Colombo Metro and 29.1 months in rural areas; it is 24.1 months in urban areas. Mean duration of exclusive breast-feeding is 2.7 months in estate areas compared to the country average of 3.7 months and 4.0 months in rural areas. Awareness about AIDS is low at 39.7% in estate areas compared to about
94% in the rest of the country. However, there is no significant difference between urban, rural and estate areas and between literates and illiterates in the prevalence of diarrhoea.

**Table-22. Place of delivery by area of residence and literacy**

<table>
<thead>
<tr>
<th>Area of residence/literacy</th>
<th>Place of delivery (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Govt.</td>
</tr>
<tr>
<td>Urban</td>
<td>75.8</td>
</tr>
<tr>
<td>Rural</td>
<td>95.9</td>
</tr>
<tr>
<td>Estate</td>
<td>81.3</td>
</tr>
<tr>
<td>Illiterate</td>
<td>81.2</td>
</tr>
<tr>
<td>Semi-literate</td>
<td>90.9</td>
</tr>
<tr>
<td>Literate</td>
<td>89.8</td>
</tr>
</tbody>
</table>

Lack of resources, transport, health care facility in the neighbourhood and household responsibilities are cited as some of the constraints faced by women while seeking medical care (Table-23). There is also a negative relationship between unemployment and health seeking in districts (Figure-54). When unemployment increases, the outpatient load in government hospitals declines indicating that the unemployed people do not seek health care.
Table-23. Constraints to medical care encountered by women (%)

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Proportion of women affected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sri Lanka</td>
</tr>
<tr>
<td>Lack of resources</td>
<td>32.5</td>
</tr>
<tr>
<td>Lack of transport</td>
<td>26.6</td>
</tr>
<tr>
<td>No healthcare facility</td>
<td>22.6</td>
</tr>
<tr>
<td>HH responsibilities</td>
<td>22.4</td>
</tr>
<tr>
<td>None to accompany</td>
<td>18.2</td>
</tr>
<tr>
<td>No female provider</td>
<td>8.2</td>
</tr>
<tr>
<td>Don’t know where to go</td>
<td>5.8</td>
</tr>
<tr>
<td>Need to take permission</td>
<td>4.7</td>
</tr>
<tr>
<td>Others</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Figure-54. Unemployment and health seeking in districts

Source: Government of Sri Lanka 2002a, Nanayakkara 2004
6. MEETING THE CHALLENGES – IMMEDIATE PRIORITIES

The biggest challenge for Sri Lankan health sector is to sustain the past success and take Sri Lanka towards the global best. As illustrated by Figure-55, Sri Lanka’s past success vis-à-vis life expectancy is phenomenal compared to other comparable nations with similar per capita GDP. The country took off early in its efforts towards health system development and the efforts were sustained for

Figure-55. Sri Lanka’s success vis-à-vis life expectancy

![Graph showing life expectancy vs per capita GDP]
longer. Other countries still lag behind Sri Lanka by about 7-10 years in life expectancy. But, the biggest challenge for Sri Lanka is to sustain the efforts and the success. Since Sri Lanka is on a higher base now, any incremental benefit from now on would require higher incremental cost. If the efforts and the resources are not hiked up significantly, it would be difficult to sustain the success and the lead over other nations.

As we have seen in the previous chapters, challenges faced by the Sri Lankan health sector are plenty and it is necessary to act strategically to address them in a systematic manner. While the challenges are many, they are linked so much so that some amount of prioritisation is possible. Priorities that require immediate attention during the next decade (2006-15) are listed here.

6.1 Attaining Millennium Development Goals

6.1.1 Poverty eradication

Sri Lanka is yet to address five out of the eight Millennium Development Goals before 2015. Eradication of poverty emerges as the top most priority. Although it is a broad developmental goal and requires inter-sectoral cooperation, eradication of poverty is crucial to attain health goals. The incidence of poverty is particularly high among those employed agricultural sector and Sri Lankan Tamils and in North East and Uva provinces. If the differences in poverty between population sub-groups is eliminated, it is possible to bring the proportion living below the poverty line down to below 10% by 2015. Given that Colombo district has achieved the lowest poverty level of 5%, it is possible to bring poverty
down even below 5%. If Sri Lanka has to achieve the Millennium Development Goal, then it has to reduce the level of poverty to less than half (i.e., 12.5%).

Unless poverty is eradicated, diseases of poverty will continue to persist. Reduction of poverty is likely to bring down the proportion of under-weight children from 24% to 16%, nutrition deficiency from about 22% to less than 10% and IMR from 16 to less than 10. Sri Lanka articulated a poverty reduction strategy in 2001 which focused on restoring peace and economic growth in the country (Government of Sri Lanka 2002). Its main pillars are:

- Strengthening the economy;
- Reducing poverty caused by conflict;
- Creating opportunities for the poor to participate in economic growth;
- Investing in people;
- Empowering the poor and strengthening governance; and
- Implementing an effective monitoring and evaluation system. The strategy is currently being refined by the new administration.

Given the achievements of some provinces, districts and ethnic groups, it is possible to bring down poverty from 25% to 5.0–9.2%, unemployment from 8.4% to 3.6% and under-weight children from 24% to 16%. It is also possible to bring down crude death rate to as low as 3.
6.1.2 Reduction of child mortality

Sri Lanka should aim to bring down the child mortality from the present level of 20 per 1,000 live births to the global best 3. To achieve the Millennium Development Goal for the reduction of child mortality, Sri Lanka has to bring it down to about 7 per 1,000 live births. The MDG for IMR is 9 per 1,000 live births (Table-24). The possible route to achieve this is the reduction of prenatal mortality, low birth weight children and child malnutrition. In Sri Lanka, every fourth infant born weighs low and every third child is malnourished. These two are linked to poverty because these rates are high in populations suffering from poverty.

Table-24. MDGs concerning family health programme

Source: Government of Sri Lanka 2004b

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2001 Benchmark</th>
<th>Target 2009</th>
<th>MDG 2015 target</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMR (per 100,000 live births)</td>
<td>47.0</td>
<td>42.0</td>
<td>36.0</td>
</tr>
<tr>
<td>IMR (per 1,000 live births)</td>
<td>12.2</td>
<td>10.6</td>
<td>9.0</td>
</tr>
<tr>
<td>Institutional deliveries (%)</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>Underweight children &lt; 5 yrs (%)</td>
<td>29.4</td>
<td>24.8</td>
<td>15.0</td>
</tr>
</tbody>
</table>
6.1.3 Improvement of maternal health

Maternal mortality rate in Sri Lanka is 47 per 100,000 live births (some estimates place it at 92). Millennium Development Goal for Sri Lanka is to reduce the MMR to about 30 per 100,000 live births. Given that the rate is zero in many countries, it is possible for Sri Lanka to aim to achieve even this target of zero MMR. The single most factor causing maternal deaths seems to be the prevalence of anaemia among pregnant women.

6.1.4 Combat HIV/AIDS, Malaria and other diseases

The prevalence of HIV/AIDS, although low at present, has been increasing over the years. It is important for Sri Lanka to halt this before it explodes into big threat. Similarly, malaria has significant (6 deaths per 100,000 population) presence. It is found that the poor people are the ones left unprotected. It is important for the government to target this group (estate, rural and illiterate populations). Same is true for TB as well.

6.2 Lifestyle disorders

6.2.1 Injuries

Injuries primarily affect the younger age groups and often results in deaths or disabling conditions. Domestic violence, especially against women, is not always reflected in physical injury. Therefore, it is important to recognize the health component (mostly psychological) of violence experienced by men, women and children in addition to its injury component. Injuries is one condition which is
entirely preventable and therefore, has to be avoided at any cost to minimise the disease burden and deaths. Each cause of injury, as it can be seen, requires different kind of intervention – technical and behavioural.

Injuries top the leading causes of hospitalisation and about 3% of Sri Lankan population is affected by injuries annually. Focus group discussions with health care delivery staff and perusal of hospital records indicated that injuries account for about 30% of all hospital admissions and about 3-5% of all outpatients in Sri Lanka (NCMH 2004a). It affects men and women almost equally although men reported a slightly higher proportion of injury compared to women. Road traffic accidents rank high among the possible causes of ill-health and premature death for adult men aged 15-44. Another major reason for injury is alcoholism and related domestic violence affecting both men and women.

Self-inflicted injuries (including suicide) is the other major cause of injuries in Sri Lanka. About 5,000 persons commit suicide every year in Sri Lanka and major reasons for suicides are alcoholism, drug addiction, poverty, love failure, unemployment, sickness, failure in exams and unwanted pregnancies. About 80% of alcohol addicts seeking help from de-addiction centres attempted suicides at some point of time in their life. Farmers, when poverty strikes them due to losses, end their lives too. Depression and schizophrenia account for 30-40% of suicides in the country.
6.2.2 Non-communicable diseases

Prevalence of diabetes, hypertension and liver and heart diseases are on the rise in Sri Lanka. The combined share of these diseases in hospitalisation and deaths is significant and is fast increasing. The steep increase in the burden of non-communicable diseases is largely driven by population aging, augmented by the rapidly increasing numbers of people who are at present exposed to tobacco, alcohol and other risk factors, such as obesity, and physical inactivity.

Unlike the maternal and child health and communicable diseases, knowledge about the non-communicable diseases and their symptoms is limited among the community (Perera and Gunatilleke 2005). As a result, those affected by these diseases, especially in areas far away from formal medical facilities, are put to prolonged self-medication; poor households, those living in remote areas, and women are the worst affected. Hence, it is necessary to diagnose these diseases early so that patient could get appropriate care at appropriate time. Even after diagnosis is made, people still may continue with self-medication if treatment facilities are out of reach. The problems encountered by those suffering from non-communicable diseases are distance, cost (direct and indirect), follow up and sustained care, and tedious hospital procedures.

Typically, cost of care per patient per day is high for outpatient visits compared to hospitalization in the case of non-communicable as indicated by the cost estimates for managing/treating diabetes (Table-25). While outpatient care is expensive in Colombo, the city patients enjoy comparative cost advantage in the
case of hospitalization. An outpatient visit to a public health care institution costs Rs. 510/- (US $ 5.1/-) whereas it costs Rs. 1,594/- (US $ 15.9/-) in private facilities. However, another study (Government of Sri Lanka 2003a) reported the per day cost of outpatient care in public facilities as Rs. 2,543/- (US $ 25.43/-) and private facilities as Rs. 2,110/- (US $ 21.10/-). It also reported that the patients benefited if they mixed public and private facilities for seeking treatment. About one-fifth of the patients seeking care for diabetes reported a drop in their economic status even while failing to get appropriate care (Perera and Gunatilleke 2005).

Table-25. Cost of treating diabetes at public health care institutions

Source: Perera and Gunatilleke 2005

<table>
<thead>
<tr>
<th>Income group</th>
<th>Cost per OP day (Rs.)</th>
<th>Cost per hospital day (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
<td>Indirect</td>
</tr>
<tr>
<td>Low</td>
<td>341</td>
<td>125</td>
</tr>
<tr>
<td>Medium</td>
<td>334</td>
<td>152</td>
</tr>
<tr>
<td>High</td>
<td>1,210</td>
<td>50</td>
</tr>
<tr>
<td>All</td>
<td>371</td>
<td>135</td>
</tr>
<tr>
<td>Colombo</td>
<td>428</td>
<td>200</td>
</tr>
<tr>
<td>Other areas</td>
<td>367</td>
<td>124</td>
</tr>
</tbody>
</table>
Failure to follow up with the treatment and care worsens the condition and necessitates hospitalization. Given that 229.3 out of every 100,000 population in Sri Lanka require hospitalization due to diabetes (Government of Sri Lanka 2004a), about 44,000 people require hospitalization due to diabetes and the rate is increasing. The cost of treatment for diabetes per year is estimated to vary between Rs. 1,142/- (US $ 11.32/-) and Rs. 9,350/- (US $ 93.5/-) depending on other complications and the type of drugs (Government of Sri Lanka 2003b). Given this, the country’s annual burden of treating diabetes can be estimated in the range of Rs. 50.25 million to 411.4 million (US $ 0.50-4.11 million).

Given the heavy burden of treatment, It is found that only about one-fifth of the patients suffering from non-communicable diseases successfully mange the disease while the rest fail partially or fully (Perera and Gunatilleke 2005). Rate of failure seems to depend on the treatment facilities in the neighborhood; for instance, Colombo has the lowest failure rate compared to other areas where facilities are underdeveloped.

6.3 Ageing

Mainly due to gains in longevity, proportion of elders in general and old-old population (75+) in particular is on the rise and this will become a vulnerable segment in future. One unique feature of old age population is that the proportion of women would be particularly high. Ageing would contribute heavily to the country’s disease burden as ageing, in addition to lifestyles, is an important determinant of non-communicable diseases. While it is possible to intervene in
the case of lifestyles, one can only hope to cope with ageing. More specifically, geriatric care would be an important component of health care requirement. At present, Sri Lankan health system is not tuned towards dealing with ageing. Many of the conditions affecting old people such as cataract surgery are not available to the people in their neighbourhood and they are not aware of the facilities existing elsewhere too.

In addition to contributing to disease burden, ageing also poses an enormous economic problem to Sri Lanka. It is likely to push the dependency ratio in Sri Lanka from 47% in 2002 to 72.5% in 2041 and therefore, Sri Lanka needs to find resources to take care of the old age population. Sri Lanka will be the only developing country with a relatively higher share of old age population.

6.4 Health system issues

While demand on the health system has increased due to poverty, lifestyle, and ageing, health system itself faces a lot of problems. It is necessary to strengthen the health system to deal with the existing and emerging demands on it. This section lists out the issues requiring urgent attention.

6.4.1 Under-funding

Majority of the health achievements of Sri Lanka were made possible mainly by the dominant role played by the government in financing health care. But, this advantage of Sri Lanka seems to be waning because the government has not been able to raise funding keeping pace with the increasing population, changing
epidemiology and medical progress (Hsiao 2000). The range of choice provided by government health care institutions does not reflect the range of population health care needs or the range of choice possible to deal with the existing spectrum of disease burden. For instance, rural people are of the opinion that government health care facilities give only two drugs for every illness (NCMH 2004a). Range of choice, where exists, is limited to certain higher level institutions. As a result, these facilities are over-crowded with a comparative neglect of lower level institutions owing to lack of facilities. Bed occupancy rate declines gradually as one moves from higher to lower level facilities. About 10-30% of inpatients treated in higher level facilities can be treated in facilities that are at least one level below them (NCMH 2004a). Similarly, about 30% of outpatients accessing higher level facilities can be treated at a facility at least one level below. Hence, there is a need to simultaneously raise the quantum of government health care funding as well as to optimally utilise the existing resources by placing them where they are required the most.

Tight government funding has affected public health spending and the non-salary component of the curative care spending thus increasingly limiting the choice available to the people. Insufficient funding restricts the utilisation of the staff potential too thereby unintentionally steals the staff skills. At the same time, overall inadequate funding has also affected the staff salary. Doctors and other skilled staff are paid less than the market wage for the comparable staff in the private sector.
6.4.2 Unclear and inequitable macro-organisation of health care

The role of provinces, districts, the private sector and various levels of government health care institutions in the provision of health care is not clearly defined. While the responsibility to provide health care was decentralised following the 1989 Amendment, corresponding financing resources were not decentralised (Hsiao 2000, Maulana 2005). Nor do the provinces enjoy enough taxing powers to raise their own resources required to provide adequate health care to their population. Even some of the central government initiatives requiring the provincial support are not covered by adequate funding at that level thus putting the already over-dependent provinces under financial stress. Some provinces would require enough resources to correct certain imbalances in the availability of facilities across provinces. Similarly, the role of private sector is unclear. Ironically, the private sector is strongly present in areas where the public sector is also strong. As a result, some areas are presented with strong public and private sectors with the comparative neglect of other areas which are deprived of even basic services.

In many areas, demand for health care services, especially for skilled manpower, far exceeds the supply. This is mainly due to the overall shortage of skilled manpower such as specialists, and nurses. Four districts account for 63.5% of the specialists in the country leaving only 36.5% for the rest 84% of the districts. Similarly, each nurse serves about 10,000 population in some districts but only about 50 in another.
At the same time, there would be over-supply of physicians in few years from now as there has been a steep increase in the number of physicians in the recent past (Hsiao 2000). There is no concrete plan to deal with the possible scenario wherein there would be too many physicians. The possible outcome would be supplier induced demand and resultant cost escalation without helping to reduce the disease burden. In order to overcome such a scenario, it is essential to have a close coordination between the three bodies – Ministries of Education and Health, and the Board of Investment – that are responsible for production, employment and utilisation of physicians in the country. The lack of coordination and its effect on the availability and distribution is not restricted to human resources alone. Lack of coordination was also felt as a major drawback in dealing with the disaster caused by the recent Tsunami.

There is also no clear policy about the spread, involvement and financing of the private provision of health care. Private health care is vastly financed by out-of-pocket household spending and there is no mechanism to streamline this spending. There is no regular consultation with the private sector regarding the government expectation from it. There is also no regulation of this sector. Political decentralisation made the regulation of private sector a Provincial responsibility but no additional resources were earmarked for the provinces for this purpose (Hsiao 2000). Different standards are set for private and government sectors especially in the case of ayurvedic doctors, and pharmacists.
Although benefits of public health care facilities are fairly equitably distributed in Sri Lanka compared to many other nations, the level of equity has been gradually declining during the last two decades or so (Hsiao 2000). The richest quintile had a share of 9% of public spending in 1979 but their share has increased to 18% in 1997. On the other hand, share of the poorest quintile has declined from 30% 1979 to 20% in 1997.

6.4.3 Public sector inefficiency

Management of public sector health care institutions is not adequately decentralised. Hospitals are not interested to mobilise local resources as they are not allowed to retain the resources thus mobilised (Maulana 2005). Pro-active and decentralised management of the government health care system is a basic necessity to deal with the decentralised political system and to respond quickly to health care needs of the population, especially to disasters like Tsunami, flood, cyclone, and drought.

Periodic assessment of health care needs of the population is not undertaken by the government so as to position the health care system to effectively deal with any eventuality. As a result, services provided by government health care institutions do not match people’s health care needs. Whatever services offered by these institutions are not informed to the people, who are required to shop around to find out the existing facilities and more often visit government health care institutions only to be told that the required facility is non-existent. Diseases of elderly people are not adequately addressed especially by the lower level
facilities. Similarly, people travel more than 12 km for delivery and inpatient care; some people (those in estates) even travel up to 40–60 km.

The staff strength has increased without necessarily adding services to the people and dominance of administrators in the functioning of health care institutions is increasing without helping to enhance the efficiency. Certain essential facilities such as BP apparatus, refrigerators, weighing scale, ‘thriposa’ nutritional supplement, chlorine, the tablet to test the chlorine content of water, mosquito spraying, and lab facilities are either non-existent or inadequate. Overall drug supply is also inadequate. As a result, about 50-70% of those using public sector are forced to buy drugs and supplies and undergo diagnostic tests in the private sector.
STRATEGIC HEALTH PLAN FOR SRI LANKA

Sri Lanka stands as a model for the rest of the world to showcase the health outcomes of the active health system intervention by the government. Active government intervention in health during the 1950s and 1960s was instrumental in shaping people’s health. Although the pace of intervention has slowed down since the 1970s, the known fruits of such intervention should make the government to enthusiastically support the health sector more strategically.

6.5 Health care system as an engine of health development

This report has identified four aspects viz., MDGs (poverty in particular), lifestyle disorders, ageing, and health system defects as the major priorities requiring immediate attention during the next decade. Among the four, the first three are welfare issues with implications for health whereas the last one is a health care system issue. Figure-56 explains how these four are connected. More specifically, it explains how the health care system can act as an engine for the progress of health. Efficient macro-organisation ensures adequate funding for health care which, in turn, results in efficient public sector provision of health care. On the other hand, efficient public provision avoids wastage and enhances the resource availability which is a pre-requisite for efficient organisation of health care. All the three positively influence
Figure-56. Engine and the route of health development
6.6 Vision

Having laid down the platform for higher achievements, it is time for Sri Lanka to launch efforts to take Sri Lanka towards the global best. The overall aim of the strategies indicated here is to attain this goal. The vision and the strategic objectives are given in Figure-57.

6.7 Strategic objectives

Sri Lanka should address four key issues if the country is to move towards the global bets. They are listed as the core objectives of the strategic health plan. They are

- To attain health goals of the Millennium Development Goals
- To eliminate diseases of the poor in a more strategic manner with an ultimate aim of reducing their poverty
- To prepare the health system to cope with diseases of the elderly
- To deal effectively with lifestyle disorders with the twin aim of reducing the disease and financial burden

It is possible to link all the crucial issues faced by the Sri Lankan health system to one of the four objectives mentioned above.
6.8 Strategies identified by the national policies

Sri Lanka falls short of the global best by 12.2% in life expectancy, 35.3% in morbidity, and 81.3% in IMR. Poverty is also unacceptably high in Sri Lanka. Regression results indicate that every percentage increase in per capita GDP results in significant increase in life expectancy. Nevertheless, given that the life expectancy in Sri Lanka has already reached a very high level, it would require a very high increase in per capita GDP to raise the life expectancy by one year. One cannot wait for the GDP to enhance the life expectancy and health status of the population. Moreover, it is not enough to raise health care resources just in tune with the economic growth. Health care resources have to grow faster than the GDP or per capita GDP to effectively meet the challenges of the health sector. Therefore, separate strategies specific to the health sector are to be drawn up.
Before drawing up the strategies of this report, let us look at the strategies already developed by the recent policy documents of the government.

Three policy documents were released during the previous decade and let us analyse the strategies brought out by these policies to address the strategic objectives of this report. National Health Policy 1996, Presidential Task Force 1997 and Health Master Plan 2003 are the three major policy initiatives of the government thus far (Government of Sri Lanka 1997, 1997a, and 2003). The objectives and the strategies identified by these documents are given in Table-26. A Commission to give direction, enhancement of health care resources, comprehensive health care that includes private sector, decentralisation, re-organisation of service provision, performance appraisal system, and quality of care are the key strategies identified by these policy documents.

A survey among 100 key informants identified enhancement of efficiency as the top-most priority for reform followed by equity and the need for responding to local needs (Government of Sri Lanka 2003b). Reduction of cost, alternative financing mechanism for health, better public-private coordination, human resource development, and re-organisation of government provision of health care with decentralisation of responsibilities were the other aspects requiring reform according to the survey. Escalating health care demand and financial resource constraint are cited as the two main reasons for a demand for reform. Ministry of health is identified as the appropriate lead organisation to carry out the health sector reform while the private sector, Ministry of Finance, Non-
### Table-26. Strategies identified by government policies

**Source:** Government of Sri Lanka 1997, 1997a, 2003

<table>
<thead>
<tr>
<th>Objective</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>To attain health goals of Millennium Development Goals</td>
<td>Ensure delivery of comprehensive health services which reduce disease burden and promote health</td>
</tr>
<tr>
<td></td>
<td>Strengthen stewardship &amp; management of health system</td>
</tr>
<tr>
<td></td>
<td>Develop, regulate &amp; coordinate with private health sector</td>
</tr>
<tr>
<td>To eliminate diseases of the poor in a more strategic manner with the ultimate aim of reducing their poverty</td>
<td>Establish Commission for National Health to give direction based on needs, and priorities</td>
</tr>
<tr>
<td></td>
<td>Improve mobilisation, allocation, &amp; utilisation of resources</td>
</tr>
<tr>
<td></td>
<td>Develop human resources in tune with needs</td>
</tr>
<tr>
<td></td>
<td>Provincial resource allocation based on national priorities &amp; needs</td>
</tr>
<tr>
<td></td>
<td>Reorganise govt. health care system in the context of decentralisation</td>
</tr>
<tr>
<td></td>
<td>Improve preventive &amp; curative services of estate population, and victims of war &amp; conflict</td>
</tr>
<tr>
<td></td>
<td>Provide basic health care free of charge in govt. facilities</td>
</tr>
<tr>
<td></td>
<td>Adapt a system of performance appraisal to improve efficiency and effectiveness</td>
</tr>
<tr>
<td>Objective</td>
<td>Strategies</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td>To prepare the health system to cope with diseases of the elderly</td>
<td>Integrated approach with govt. and non-govt. sectors</td>
</tr>
<tr>
<td></td>
<td>Improve preventive &amp; curative services of elderly</td>
</tr>
<tr>
<td></td>
<td>Encourage health systems research</td>
</tr>
<tr>
<td></td>
<td>Develop programmes for elderly &amp; displaced</td>
</tr>
<tr>
<td></td>
<td>Improve the accessibility and quality of health care</td>
</tr>
<tr>
<td>To deal effectively with lifestyle disorders with the twin aim of reducing the disease and financial burden</td>
<td>Map all available resources to enable planned development of facilities and develop alternative financing mechanism</td>
</tr>
<tr>
<td></td>
<td>Promote community involvement in health care</td>
</tr>
<tr>
<td></td>
<td>Improve preventive health programmes and existing medical facilities</td>
</tr>
<tr>
<td></td>
<td>Provide more efficient and cost-effective health care</td>
</tr>
<tr>
<td></td>
<td>Develop indigenous systems of medicines and homeopathy</td>
</tr>
<tr>
<td></td>
<td>Develop health promotional programme using formal education system and the media</td>
</tr>
<tr>
<td></td>
<td>Improve hospital services in the districts in a planned manner</td>
</tr>
</tbody>
</table>

Government Organisations, consumer groups, and Provincial Health Ministries could be the other actors in the process of reform.
6.9 Strategic plan 2015

Strategies drawn up here are oriented towards attaining the 4-fold strategic objectives and relate to four structural components of the Sri Lankan health system viz., organisation, financing, incentives, and financing. Health care system is used as an engine to address health issues arising out of old age, lifestyle and poverty.

6.9.1 Organisation of health care

Macro-organizational structure of a health care system affects the efficiency and quality of health services. In structuring macro-organization for health care, the fundamental question is how to divide up the complex functions into different organizations and make them accountable in achieving societal goals. At present, services are concentrated at higher level institutions while the lower level institutions operate without even basic minimum facilities. The present organisation does not help to address the problems of poor and the elderly.

1. Split outpatient and inpatient facilities

An issue that has to be addressed through macro-organizational structure is how to efficiently and equitably organise primary, secondary, and tertiary care services. In Sri Lanka, given the disparity in health care loaded in favour of urban areas, it is important to move health care system (government and private) close to disadvantaged (estate, rural and old age) populations. One of the strategies available to the government to serve the poor and the elderly better is to split the
outpatient and inpatient care services in the country. All the outpatients (whether they hail from urban, rural, or estate) should receive uniform quality of care. For this purpose, it necessary that all the minimum diagnostic and curative facilities should be made available at the outpatient centres. Most common illnesses can be diagnosed and treated at the outpatient level, complicated diseases may require specialists and/or inpatient services, while the most complicated and serious illnesses may require tertiary care. Geriatric care, care for non-communicable diseases, and treatment follow up should be part of outpatient services.

Conditions that would be treated as outpatient and inpatients should be defined clearly and announced to the people through a citizen charter so that people can easily choose the institutions for appropriate care. Similarly, facilities available in each health care institution (outpatient/inpatient) should be included in the citizen charter, which in turn should be displayed prominently at the entrance of each institution.

Whatever services provided at the outpatient services should not be repeated in inpatient services. Duplication of services will only encourage bypassing of facilities. Only those patients with reference chits from outpatient centres or those with conditions (severe injuries, for instance) defined as requiring inpatient care should be seen in the inpatient facilities. Patients once discharged from the inpatient facilities will be referred back to the nearest (to the patient) outpatient
institution. Facilities required for such a follow up such as drugs should be made available in the outpatient centres.

The split of institutions requires starting of new outpatient institutions in urban areas, reclassification of already existing health care institutions, and reallocation of man power, equipments and other facilities. Private sector and the traditional system of medicine should be integral part of all these classifications. Each level of government health care institutions must be provided with autonomy and incentives adequate enough to deal with local emergencies and needs.

While designing the split, certain drawbacks of such a system should be kept in mind and as far as possible, should be overcome with concrete measures. For instance, when health services are fragmented, laboratory and diagnostic tests may have to be duplicated at each level. More importantly, each level may not know what test and treatment the other level has given to the patients. Consequently, patients can suffer from gaps in fragmented services, toxic effects from over-use of drugs, etc. Hence, it is important to develop health information system and sharing of information as part of the design. While basic data concerning the population should be kept at the MoH offices, all the outpatient or curative care details should be kept at the nearest (to the patient) outpatient institution, which would be referred by the inpatient institution when referred or required. Computerisation and linking of data at levels and of all types of providers (private, government, western or traditional medicine) is required for this purpose.
2. *Service packages and the citizen charter*

Given the addition of new diseases/conditions that are responsible for the increasing disease burden in the country, it would be difficult for the government to follow the Universalism principle of providing everything to every one. If everything has to be provided, it would be difficult to cover every one and vice versa. While attempting to provide everything to every one, government may end up providing nothing to anyone due to resource constraint. Therefore, it is essential to develop a feasible service packages that would be made available at the different levels of institutions. Such packages should be announced to the people through a citizen charter and should be made available at all times. Display of a list of services offered and their price, if any, should be made mandatory for each institution (government or private). A complaint box can be kept in every centre for the people or clients to express their opinion about the availability of services that are supposed to be provided.

3. *Late clinics*

One of the major drawbacks of the government health care system, which the private sector tries to cash in, is that the government institutions are open only during the specified time of the day. People are forced to use the private sector if they fail to make it to the government centre within the specified time. In order to overcome this drawback, government can operate late clinics in government institutions to cater to the demand arising after the office hours. The late clinics, to be charged a fee equivalent to 50% of the private consultation fee, can be
staffed by either government or a private doctor(s) on a fee sharing basis. The cost sharing formula and other terms of conditions can be worked out by a committee formed for this purpose. Government doctor staffing the late clinics should be allowed to take his/her share of the fee.

Late clinics, along with fair-price medical store, will reduce the financial burden of the poor patients considerably because consultancy fee and cost of drugs are the dominant items in household out-of-pocket spending. Moreover, late clinics would also give additional revenue to the government institution, which should be allowed to reinvest the revenue thus generated within the institution for the development of existing or additional facilities.

4. Public-private partnership

While the ideal scenario would be that the government provides all the services to every one, it is proved to be increasingly difficult for the government to provide all the services to everyone. Given this, government should strategically plan the role of non-government sector in the provision of health care. Private sector may be encouraged to provide those services that are not provided by the government or in geographic locations where the government is not in a position to operate its facilities. A list of services provided by the government institutions and a possible list of services open for the private sector should be prepared and kept ready for dialogue with or for provision of license to the private (for-profit or not-for-profit) providers so that the same type of services are not duplicated in the same area. This is also applicable to the traditional medicine sector. When
the services are negotiated for the licence, their price should also be included with a provision for their annual revision by the government. A treatment protocol may also be developed for the reference of the private sector.

Cost of drugs accounts for a significant proportion of the household out-of-pocket expenditure. In fact, this is the single dominant item in the private expenditure because even a majority of patients accessing government institutions are required to buy drugs and supplies from the private drug stores. More often, patients may have apprehensions about the quality and price of the drugs and supplies provided by the private drug stores. Moreover, the patients some times are required to shop (and therefore, travel) around for drugs and supplies. In order to overcome these difficulties, it is necessary for the government to open fair-price medical stores, operated either by the government or the private sector, inside each government health care institution. A pre-paid financing arrangement (patients can be made partners by paying some amount periodically to claim some price discounts) can also be designed for such needs. This is in addition to the store distributing drugs and supplies free of cost to the patients.

Referral system between all the institutions (government, private, modern or traditional) should be established so that records (electronic or otherwise) are transferred to appropriate institution for reference and follow up. No service should be repeated unless otherwise medically stated.
5. **Re-orient preventive and promotive care**

Preventive and promotive care at the community level are now restricted to maternal and child health although some other services too are provided irregularly. This approach keeps men, adolescent girls, and the elderly out of the preventive and promotive care bracket. Given the changed context of increasing proportion of elderly population and fast rising prevalence of lifestyle disorders, it is necessary to re-orient the preventive and promotive care to include men, adolescents, elderly, environment, lifestyle, lifestyle disorders and disaster management. Train and re-orient the staff towards including this aspect as part of their routine. Preventive and promotive centres need to be equipped to deal with all community needs. At present, they lack certain essential facilities such as weighing machine, BP apparatus, chlorine, etc. All these need to be improved in all the MoH/PHM centres.

Nutrition of school going children, lifestyles of orphaned children or children of parents living abroad, and physical exercise of children and adolescents require special attention. Some individual and community awards rewarding healthy child, fit elderly, good health practices, and strong community (village) may be instituted to promote healthy habits of the community.

6. **Rationalise the production of manpower**

At present, the size and the quality of the health manpower are inadequate in many areas, especially in rural and estate areas. At the same time, there is
excess manpower in some urban government institutions. Regarding the size, some sort of balance between the doctors, nurses and paramedics needs to be worked out and implemented. Similarly, manpower requirements (both size and skill) of each level of institution (including the proposed development of the private sector) need to be assessed. This should be linked with the production of the size and type of manpower. It requires close coordination among the Ministries of Health and Education and the Board of Investment. Ministry of Health must take the initiative to estimate the health manpower requirements for the country and discuss it with the other two bodies for implementation. Depending on the time lag, the country may choose between ‘make or buy’ option.

An increase in the number of physicians over and above the combined needs of the government and non-government sectors might result in supplier induced demand for physician services. Economic theory would have predicted that an increase in supply of physicians should reduce the price of services. But in the health sector, an increase raise the prices. An increase in medical school admissions would increase the number of physicians, but also expand the number of specialties and specialists. In turn, it transforms the medical labour market and modality of medical treatments and increases the price and quantity of services delivered, resulting in increases in health care costs.

Quality of education is an important area that requires immediate attention. Syllabi of medicine, nursing, and other paramedical staff need to be reworked to
include the community requirements. More importantly, subjects such as poverty, environment, geriatric care, lifestyles, and prevention of lifestyle disorders including suicides, and substance (alcohol, drugs and tobacco) abuse should be made part of the curriculum. At present, medical students are not taught about patients’ (in)ability to pay for health care and as a result, are distanced from the patients when they start their practice. Also, they should be taught about semi-ideal and poor settings of health care. At present, they are used to practice in an ideal setting where every facility is provided.

The level of training concerning nursing, pharmacist, laboratory, and other paramedical manpower is low at present. The education pertaining to these disciplines need to be redesigned to gradually move towards degree programmes. Also, there is no quality follow-up education beyond the basic education; only nursing discipline has the advantage of post-basic training. All the training except the medical education occurs in a non-serious manner in which there is no incentive for good performers. Since all are essentially absorbed in the government jobs at the end, there is no extra incentive for the trainees to learn the subject well. Some of the young talents are lost at this point and therefore, does not augur well for the country as it affects the quality of care as well as the career development of the staff.

Connected to this aspect is the required standard for staff working in government and private sector institutions. At present, there exists a dual standard when it comes to the qualification of staff especially in the fields of pharmacy and
ayurvedic medicine. This should change and there should be uniform quality requirements for both government and private sectors. Scaling up of the quality of education requires higher level training of the faculty particularly in all the paramedical disciplines.

7. Performance appraisal

Periodical appraisal of the performance of the health care institutions (private or government) against their specified objectives and roles and also whether they achieved value for money. Periodic appraisal of complaints received from the public/clients, conduct of satisfaction surveys, and focus group discussions among the clients and the public should be part of the performance appraisal. Annual health summits may be used for undertaking a performance appraisal at all levels (institutional, district, provincial and national).

Best performance award should be an annual feature to award best community health initiative, best performing institution, healthy district and the best province for managing the resources well. Performance indicators may be specifically developed for this purpose. More stress should be given to prevention although best (cost effective) curative practice may be rewarded too.

6.9.2 Financing

An important principal structural component of a health care system is the financing of health care. Financing influences who gets health care, how much resource is spent for health care, who pays for the costs, and whether health
expenditure inflation can be managed. Financing in health care includes mobilisation of resources, their organisation and allocation for various health care needs.

1. Mobilisation of resources for health

Sri Lanka has twin funding mechanism for health care. Two funding sources for health are government tax financing and the household out-of-pocket spending. Shares of both these sources remained steady for many years now although private spending has registered a gradual increase in the recent past as a result of slowing down of government spending. First immediate requirement is to increase the government spending to at least 2.5 – 3.0% of GDP. Private spending would continue to be about 1.5 - 2.0% of GDP. Both would place the total health spending in the country at about 4.0 – 5.0% of GDP, which would be still below the average health care spending of comparable nations.

In addition to tax financing and the possible private out-of-pocket spending, government should also look for international sources to fund the health sector partially. Recovery of health system after the Tsunami disaster and attaining Millennium Development Goals are the two opportunities open for the government to raise international funding. Similar funding sources to deal with specific health care requirements may be explored. Support of academic professionals may be sought to tap the research and development potential of the country in raising the funding. This source would require carefully developed proposals and protocols.
A large number of countries and foreign organizations responding to the Government's international appeal for immediate and medium term help have assisted or promised assistance to the Tsunami disaster victims of Sri Lanka. A total of 341,296 kg of relief assistance by way of emergency medical kits, drugs and supplies, school kits, tents, syringes, purified water, food items have already been airlifted by 50 aircrafts by Singapore, India, Malaysia, Dubai, Saudi Arabia, Pakistan, Japan, France, Russia, Israel, U.K., Greece, Nepal, China, UAE, Turkey, Switzerland, USA, Italy, Canada, Bhutan and Belgium (Daily News 2005a). Table-27 provides information on the promised support by various countries with respect to health sector. The information is based on government non-government sources and the media. This data is no way exhaustive as resources flow from and into different directions and there is no centralized data source for the promised funding.

Alternative funding possibilities such as establishment of National Health Fund using the tax proceeds of motor vehicles, petrol, tobacco, and alcohol sales and earmarked taxes such as health cess can be explored. Health cess may be used to fund the health care of the elderly while tax proceeds arising out of the sales of motor vehicles may be used for the care of the injured; tax proceeds from tobacco and alcohol sales may be used for the treatment of lifestyle disorders. Late clinics, proposed in the earlier section, may also help the government health care institutions to generate additional resources for their reinvestment.
Table-27. Support for Tsunami relief (Health)


<table>
<thead>
<tr>
<th>Country</th>
<th>No. of agencies</th>
<th>Relief measure</th>
<th>Value of support (Rs. million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>2</td>
<td>Hospital reconstruction</td>
<td>1,150.00</td>
</tr>
<tr>
<td>Japan</td>
<td>1</td>
<td>Reconstruction of govt. hospital</td>
<td>766.00</td>
</tr>
<tr>
<td>Domestic</td>
<td>1</td>
<td>Reconstruction of a govt. hospital</td>
<td>766.00</td>
</tr>
<tr>
<td>Korea</td>
<td>1</td>
<td>Medical service</td>
<td>0.36</td>
</tr>
<tr>
<td>MMB</td>
<td>1</td>
<td>Reconstruction of govt. facilities</td>
<td>1,209.00</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1</td>
<td>Drugs, first aid items</td>
<td>1.67</td>
</tr>
<tr>
<td>Philippines</td>
<td>1</td>
<td>Medical specialists</td>
<td>0.48</td>
</tr>
<tr>
<td>Poland</td>
<td>1</td>
<td>Equipments for pediatric wards</td>
<td>31.74</td>
</tr>
<tr>
<td>Red cross</td>
<td>1</td>
<td>Reconstruction of govt. facilities</td>
<td>463.00</td>
</tr>
<tr>
<td>Singapore</td>
<td>1</td>
<td>Medical supplies</td>
<td>13.92</td>
</tr>
<tr>
<td>Sweden</td>
<td>1</td>
<td>Cholera vaccines</td>
<td>6.00</td>
</tr>
<tr>
<td>UNFPA</td>
<td>1</td>
<td>Reconstruction of govt. institutions</td>
<td>373.00</td>
</tr>
<tr>
<td>UNICEF</td>
<td>1</td>
<td>Renovation/reconstruction of govt. maternity and pediatric wards</td>
<td>730.00</td>
</tr>
<tr>
<td>USA</td>
<td>1</td>
<td>Reconstruction of govt. institutions</td>
<td>3,361.40</td>
</tr>
</tbody>
</table>
2. **National Health Commission**

There is a need for establishing a National Health Commission to deal with all the health and health care investments (government or non-government) in the country. This Commission should coordinate all the resource mobilisation and investment concerning the health sector. At present, there is no coordinating body to estimate the resource requirements, to identify investment priorities, and to evaluate the impact of new investments. Absence of such a mechanism was felt during the recent Tsunami disaster management. Moreover, some areas of health such as the preventive health require technical inputs to draw up plans to fresh investments. The Commission can provide the technical support to draw up such plans. The Commission could also provide the support required for capacity building in this area (health investment).

3. **Organisation of financing**

Efficient organisation of financing would prevent people from jumping into poverty because of health care. Private out-of-pocket spending is the worst form of health care financing as it requires the affected persons to keep resources ready when the illness strikes them. This often results in higher health care costs (as the price would be higher in a situation of emergency such as health care) and in distress selling of assets and loans. Distress selling often fetches lower price to the assets whereas distress loans carry very high interest rates as there is a ‘risk’ to the lender because the there is no guarantee that the person would survive to pay back the loan.
Options available to the government are social health insurance for the organised sector, private insurance for the rich, community insurance/financing for the village community and medisave accounts for those who don’t want to be part of all these. Separate prepaid financing mechanism to finance the care of chronic ailments needs to be seriously considered. Contribution of prepaid resources to health care finance should go up to about 40% from present 0.6%. Soft government loans for the purpose of health care could be another option to be considered to prevent the people from entering into debt trap or distress selling of assets. This is very important because about 25% of Sri Lankan people often jumps in and out of poverty and health care is one of the main reasons for this.

4. Efficient and equitable resource allocation

A bulk of the increase in government spending should be spent on the outpatient facilities to be created or strengthened in all the areas. Also, preventive and promotive care institutions require a big facelift. Creation of health management information system is another area that requires more funding. Tsunami affected areas require special attention. Special health find, if created, can be used for the care of elderly, injured, and of lifestyle disorders.

The government budget should be decentralised enough using technical norms such as per capita beds, supplies, and maintenance and differential needs of the population sub-groups such as provinces, districts, etc.. The criteria, as given in Box-8, may be used to allocate the government health care resources among the provinces and districts. At all levels, there should be a provision for autonomy to
## Box-8. Proposed resource allocation criteria

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Weight in per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>15.0</td>
</tr>
<tr>
<td>Area per 1,000 persons</td>
<td>10.0</td>
</tr>
<tr>
<td>Per capita income of the population</td>
<td>15.0</td>
</tr>
<tr>
<td>Percentage share of rural population</td>
<td>5.0</td>
</tr>
<tr>
<td>Population below 10 years of age</td>
<td>10.0</td>
</tr>
<tr>
<td>Population above 60 years of age</td>
<td>10.0</td>
</tr>
<tr>
<td>Health system performance</td>
<td>10.0</td>
</tr>
<tr>
<td>Lack of alternative facilities</td>
<td>10.0</td>
</tr>
<tr>
<td>Crude death rate</td>
<td>2.5</td>
</tr>
<tr>
<td>IMR</td>
<td>2.5</td>
</tr>
<tr>
<td>MMR</td>
<td>2.5</td>
</tr>
<tr>
<td>Disease burden</td>
<td>7.5</td>
</tr>
</tbody>
</table>
respond to local needs. In other words, about a third of the non-salary recurrent expenditure of the government budget can be decentralised at the provincial (20%) and district levels (10%).

5. *Link between national policies, budget and provincial resource allocation*

Along with decentralisation of funds, effort should be made to link national policies and the (national and provincial) budgets so that the objectives and content of the national policies get reflected in the resource allocation. Ministry of Health should take the lead and ensure that all aspects and goals of the health sector are represented in the budget. One area that receives lesser proportion of resources because of lack of technical advise is the preventive care and public health. Required technical information should be made available to enhance the resource allocation to this area.

6.9.3 *Incentives*

The third major structural component is the incentive system. The appropriate use of incentives (for clients, and providers) can have measurable positive outcomes in the provision of health services because incentive structure affects cost, efficiency and quality of health services.

1. *For clients*

One of the incentives for the clients already offered is the late clinics. This option is likely to encourage the patients to use the government facility without forgoing
their paid work during the day time. Instead of loosing their full wage so as to use
the ‘free care’ during the office hours, they may prefer to use the ‘subsidised paid
care’ outside the office hours because there would be positive net benefit to them
by doing so. This may be made clear using an example. Suppose the wage of a
casual labourer is Rs. 150/- per day and the cost of consulting fee and drugs in
the private sector is Rs. 120/- . The patient’s net benefit of accessing the private
clinic is Rs. 30/- as s/he is in a position to earn Rs. 150/- to spend Rs. 120/- . At
the same time, if s/he used the government centre, the net benefit would have
been ‘zero’ as s/he is foregoing the entire income. Considering the relatively
higher net benefit, the patient is likely to choose the private sector even if s/he
gets free consultancy and drugs in the government sector. By operating late
clinics, his/her net benefit would increase because s/he would be paying about
Rs. 60/- to the late clinic towards consultancy fee and the cost of drugs and the
net benefit would be Rs. 90/- compared to Rs. 30/- in the private sector.

Another incentive for the clients is the range of choice. Some countries enlarge
the patient choice of services/drugs with an option of sharing the cost of some
drugs that exceed the price of the lowest cost alternative (reference pricing). Fair-
price medical stores proposed earlier offers this kind of benefit because it widens
the choice for the patients. Even a range of similar drugs that are otherwise
offered free by the government may be offered through the fair price stores by
charging the patients only the cost difference over and above the cost of the
different variant of the same drug that are offered free.
2. For physicians

The way the physicians are paid and the mechanism to reward the achievements determine the incentive for the physicians. Each physician payment mechanism (fee for service, capitation, or salary) creates different financial rewards and risks for the physicians. When a nation relies on both public and private sector provision, the method and amount of remuneration determine a physician’s choice of whether to work in public or private facilities.

The proposed late clinics offer the government physicians a chance to earn more even while continuing in the same office. S/he does not have to establish a ‘market’ because market is given to him/her. Moreover, there is no investment for the physicians and so there is no need to worry about the ‘return’. The late clinics also offer incentive to the private physicians if they choose to staff the late clinics because it gives them an opportunity to establish a link with the government system and therefore, an opportunity to earn some recognition.

Some mechanism of appraising the performance of the physicians and other staff must be institutionalised and used for the promotion of the staff to higher positions. There must also be separate incentives (risk allowance, reservation for their children in admission to prestigious schools, reservation of seats for themselves in higher studies, doubling of service benefits for the years of service in those areas, etc.) for the staff for working in difficult areas.
3. For hospitals

There should be a mechanism to review and reward the performance of the hospitals (government and private). For the government hospitals, the reward may be in the form of higher allocation of resources, better facilities for the hospital and the staff, etc. For private hospitals, separate acceptable and workable incentives may be worked out. One of the options may be to openly accredit the hospital with a certificate of appreciation. Also, separate incentive should be worked out for those private providers who offer to operate in difficult areas. Government may consider a fee-for-service mechanism on the basis of the number of patients they served.

6.9.4 Regulation

Regulation often arises to ameliorate market failures and to protect the consumers because they cannot effectively organize to purchase the outputs that affect them.

1. Quality of health care providers

There is a dual standard for some of the health care professionals employed by the government and private sectors. This has to be removed and the quality of health care personnel should be uniform for both government and private. Another dualism exists between rural and urban facilities. While AMOs are staffing the rural facilities, urban facilities are staffed by the M.B.B.S. doctors. The quality and standard of care cannot be different for rural and urban areas too.
There is no quality assurance mechanism for private health care providers in Sri Lanka. Four factors are recognized as basic ingredients of quality (Hsiao 1999): a) reliable outcome measures (e.g., complication rates, and unplanned readmission rates; b) standards of medical procedures; c) powerful databases; and, d) adequate analysis. These four ingredients may be used to assess the quality of the private providers with an overall aim of correcting the quality. Annual review of private facilities will be very useful to sustain the quality.

2. Capital investments

Lack of knowledge about costs and effectiveness of new products, duplication of services and equipment, and poor capital investment planning may hinder health system efficiency and may result in relatively poor outcomes. Further, many technologies that are currently in widespread use are ineffective. In Sri Lanka, certain incentives are provided for private providers to invest for the overall betterment of care. The incentives have not succeeded so far in raising the quantum of care (Kalyanaratne and Rannan-Eliya 2004). Nor have they enhanced equity in the provision of health care. In the light of this, it is essential to review this policy and incentives need only be provided to those who would like to invest in rural and other disadvantaged areas.
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